

9-TIME **UFC CHAMP MATT HUGHES'** DURAMAX CLASSIC



# ULTIMATE **DIESEL** BUILDER'S GUIDE

## 750 HP **COMPOUND TURBO CUMMINS** RAT ROD

**32+ PAGES**  
**OF TECH**  
**& EVENTS**

**DYNO PROVEN**  
**POWER**  
**COMBINATIONS**

**INDIANA**  
**SLED PULL**  
**ACTION**

### HOW-TO

KEEP YOUR ALLISON  
**TRANS COOL**

6.7L CUMMINS ENGINE  
**UPGRADES**

POWER STROKE TOUCH-SCREEN  
**TUNING TOOLS**



**7** **UNIQUE DIESEL**  
**RIDES: INCLUDING**  
**THE FLYING PICKLE**

FROM THE EDITORS OF STREET TRUCKS



0 74369 03116 6

ENGAGED MEDIA, INC.

60

FEBRUARY/MARCH 2016  
DISPLAY  
UNTIL:  
4/19/16

**\$6.99 U.S.**





SPARTAN MP8



CHAMBER MP8



SPADE SS8



MAN O' WAR SD



TROPHY DRW







PRIZM SS8



SLIVER FP8



HYPER FP8

# *Custom Forged Aluminum Wheels*



SHIFT SD

DEALER INQUIRIES WELCOME! MORE WHEEL DESIGNS AVAILABLE ONLINE!  
[www.americanforce.com](http://www.americanforce.com) Tel. 786.345.6301 • 1.888.271.4335

**AMERICAN  
FORCE**



**40** | **FROM PIECES TO PERFECTION**  
Nine-Time UFC Champion Matt Hughes' Custom C10



**54** | **GREAT WHITE**  
No Stone was Left Unturned on this Massive Build

**14** | **RATICAL ROD**  
Larry Kilburn's Wild '32 Hudson Rat Rod



## events

**104** | **HOME-GROWN PULLIN'**  
Another Great Outlaw Sled Pull in North Salem, Indiana

## departments

**06** | **EDITOR'S NOTE:**  
SPOOLED UP!  
ALTERNATE FUN

**08** | **NEWS**

## diesel tech

**22** | **GM TRANS TRICKS**  
Allison Transmission Cooling Upgrades

**30** | **DYNO-PROVEN**  
8 Trucks Spin the Rollers and We Show You a Peek at Them

**46** | **DP TUNER'S INFINITY SYSTEMS**  
Touchscreen Tuning for the 7.3L and 6.0L Power Stroke

**64** | **BUILDING A 6.7L CUMMINS**  
Sweatin' the Details to Build a 600-HP 6.7L Cummins

## on the cover:

Larry Kilburn puts on a smoke show with his '32 Hudson rat rod, courtesy of its 700+ HP 12-valve Cummins and a set of slightly worn Nitto's. Main Photo by Chris Tobin





# 70

## ADVENTUROUS

Phoenix Pop  
Up Campers'  
Mitsubishi Fuso  
Adventure  
Camping Rig



# 80

## THE FLYING PICKLE

Ryan Abbott's  
Eye-Catching  
Custom '53  
Chevy Coe



# 86

## WICKED WILLYS

A 1,400  
Horsepower  
Duramax-  
Powered  
Rocket Ship



# 96

## RETRO ROCKET

A Streetable  
D-Max-  
Powered  
Chevy Nova

# ULTIMATE DIESEL BUILDER'S GUIDE

### EDITORIAL

Adam Blattenberg Diesel Group Editor  
Chris Tobin Editor  
Anthony Orona Managing Editor  
Henry Z. De Kuyper Senior Staff Photographer

### DESIGN

John Cabral Art Director  
Eric Knagg Design Director

### CONTRIBUTORS

Kyle Tobin, Joe Daniels, Jacob White, Steve Temple,  
Jade Tobin, Bob Carpenter, Steven T. Williams,  
Jason Sands, Jim Allen, J.S. Hansen

### ADVERTISING

Bob Huls Publisher Automotive Group  
Gabe Frimmel Ad Sales Director  
(714) 200-1930  
ghimmel@engagedmediainc.com  
Tom "Mongoose" McEwen Motorsports Director  
(714) 200-1936  
Chris Crispell Senior Account Executive  
(714) 200-1935  
Scott Neiman Senior Account Executive  
(714) 200-1922  
Andrew Demiar Account Executive  
(714) 200-1903  
John Cabral Advertising Design  
Gennifer Merriday Advertising Traffic Coordinator  
Kristan Beckman Advertising Traffic Coordinator

### DIRECT MARKETING GROUP

John Bartulin (866) 866-5146 ext. 2746  
Neil Medalla (866) 866-5146 ext. 2780

### OPERATIONS

Subroto Mallick Business Analytics Manager  
Robert Short IT Manager  
Harsh Srivastava Newsstand and Circulation Analyst  
Shailesh Khandelwal Subscriptions Manager  
Alex Mendoza Administrative Assistant  
Jeno Torres Administrative Assistant  
Victoria Van Vliet Intern Program Manager  
Arvind Sidhu Prepress Manager

### EDITORIAL, PRODUCTION & SALES OFFICE

22840 Savi Ranch Parkway, #200, Yorba Linda, CA 92887  
(714) 939-9991 • Fax: (800) 249-7761  
www.dieselworldmag.com

ULTIMATE DIESEL BUILDER'S GUIDE (ISSN 2331-8856) is published bi-monthly, 6 times a year by Engaged Media, Inc., 22840 Savi Ranch Pkwy., #200, Yorba Linda, CA 92887. **POSTMASTER:** send address changes to Ultimate Diesel Builder's Guide c/o Engaged Media, Inc., VSI, Inc., 905 Kent St., Liberty, MO 64068. © 2015 by Engaged Media, Inc. All rights reserved. Reproduction of any material from this issue in whole or in part is strictly prohibited. GST #R55050365RT001 Canadian Post: Publications Mail Agreement PITNEY BOWES, INC., PO Box 25542, London, ON N6C 6B2

### CUSTOMER SERVICE

Engaged Media, Inc.  
22840 Savi Ranch Parkway, Ste. 200, Yorba Linda, CA 92887  
Subscriptions, Address Changes, Renewals,  
Missing or Damaged Copies  
(800) 764-6278

(239) 653-0225 Foreign Inquiries  
subscriptions@engagedmediainc.com  
customerservice@engagedmediainc.com  
Back Issues: www.engagedmediamags.com

### Books, Merchandise, Reprints

(800) 764-6278 • Foreign (239) 653-0225  
Letters to Editor, New Products, or to Contribute a Story or Photo  
dw-editor@engagedmediainc.com

### SUBSCRIPTION RATES

\$19.95/1 year, \$37.95/2 years. Outside the U.S., add \$20.00 per year payable in U.S. funds. Single copy price is \$5.99.  
Please allow 6 to 8 weeks for new subscriptions to begin.

## ENGAGED MEDIA INC.

### ENGAGED MEDIA INC.

Nick Singh President  
Celia Merriday HR and Office Management  
Gus Alonzo Circulation/Marketing Director  
Jason Mulrone Director of Content  
Pinaki Bhattacharya Vertical Manager

This magazine is purchased by the buyer with the understanding that information presented is from various sources from which there can be no warranty or responsibility by Engaged Media Inc., as to the legality, completeness or technical accuracy.

GST #R55050365RT001  
Canada Post: Publications Mail Agreement #40612608  
Return undeliverable Canadian addresses to:  
PITNEY BOWES, INC., P.O. Box 25542, London, ON N6C 6B2, Canada



# ALTERNATIVE FUN

BY CHRIS TOBIN



The Cummins 12-valve powered RCP40 built by Ryan Abbott is one of the most unique diesel-powered vehicles I have ever had the pleasure of driving.

**A**s I write this, we are just a week into 2016, and I can tell it's shaping up to be a good year for diesel enthusiasts. On the pulling side of things, PPL updated the rules in what used to be the 2.6 and 3.0 classes, so there are a lot of pullers putting in long nights to rework their trucks to match the Limited Pro Stock Diesel Trucks and Pro Stock Diesel Trucks classes, and I'm excited to see what the results will be on the track.

The Pro Stock guys will be allowed to run bar and cut tires like the Super Stock competitors, and the Limited Pro Stocks will be able to go with open drive line, so in theory, we will have a lot less breakage on the track. Both classes also went to smooth bore turbo sizing, so tech should be easier, and there should be less MWE groove controversy as well. I've also heard about many drag race and dyno guys that are changing or upgrading their chassis setups and/or building or rebuilding their engines to go faster and make more power, so we should see ETs drop while speeds and dyno numbers climb throughout 2016.

Speaking of speeds, dyno numbers and

pulling, the first ever "Ultimate Callout Challenge" event (hosted by us and sister mag *Diesel World*) will be taking place in just a few months where 30 or so of the biggest and baddest trucks in the nation will battle on the track and on the dyno to see who is the baddest of all and take home a big wad of cash.

For more information on the event check out [UltimateCallOutChallenge.com](http://UltimateCallOutChallenge.com) to see what will be going on and who will be there. If you are in the area or can get to Salt Lake City, Utah, from May 4th to 6th, check it out in person: I'm sure you'll be glad that you did!

With this issue, I decided to focus on the unique and alternative side of the diesel world by featuring seven wild and very much non-traditional feature vehicles. Even if you are a straight-up, dyed-in-the-wool, purist-truck guy—I'm sure you can appreciate the hard work, creative thought and attention to detail that goes into building a diesel-powered alternative ride like the ones we have here in this issue. One of the strangest diesel vehicles I have ever had the pleasure to drive is the RCP40 airplane car that Ryan Abbott built. He is the same guy who built the "Flying

Pickle." (page 80).

The first time I met this talented fabricator, who calls himself Rabbott, he asked me if I wanted to drive the RCP40 up and down the show-n-shine area. I said, "Sure," and he asked me if I'd ever driven something with rear steering, and I told him, "Fork lifts."

He said, "You'll be fine," and sent me down the way to figure out the four-wheel steering on the fly. It was a fun little ride!

Over the winter, I hope to get some more work done on my Duramax-project desert race truck but these darn deadlines keep on pulling me out of the shop. What about you? What are you currently working on, or what did you work on over the cold winter months? As you read this, it will be spring soon, and we'll be able to get our project trucks out and on the road again. If there is something you would like to see or read about in the magazine, shoot me an email, and I'll see what I can do about it. Until next time, take care and keep it shiny side up!

— Chris  
[ctobin@engagedmediainc.com](mailto:ctobin@engagedmediainc.com)





# ADJUSTABLE AIR SPRINGS

FROM THE HEAVY DUTY TRUCK EXPERTS



EASY BOLT ON  
INSTALLATION

LIFETIME  
WARRANTY



## AMP: THE #1 SOLUTION FOR YOUR TOW/HAUL PROBLEMS

Sag & Sway?



*Solved!*

Bottoming Out?



*Solved!*

Headlight  
Misalignment?



*Solved!*



## AMP ONBOARD AIR MANAGEMENT SYSTEMS

Air Compressors • Air Tanks • In-Cab Controls

**PACBRAKE**



[www.pacbrake.com/amp](http://www.pacbrake.com/amp)

800.663.0096





## DIESELS DOMINATING 2016 DAKAR RALLY

**W**hile for the past several years the Dakar Rally has been contested far away from Dakar and the entire African continent, for that matter, (it is currently hosted in South America) it is still one of the most demanding automotive races in the world. Pushing both man and machine beyond their limits, the race is said to be the ultimate off-road test. This year, the event starts in Buenos Aires, Argentina, running through Bolivia before returning to Argentina and finishing in Rosario. The race will begin on January 2, 2016 through January 16, 2016.

As of our press deadline, only five stages of the thirteen competitive stages have been completed, but the sophomore effort of the Peugeot team, and their new 2008 DKR racecar has been the talk of the town. The race cars are powered by a 3.0L twin-turbo diesel engine putting 350 HP to the rear wheels with a long travel suspension design. Competing with a star studded cast of drivers, including 11-time Dakar winner (six on a motorcycle and five in a car) Stéphane Peterhansel; 5-time

motorcycle winner Cyril Despres; 2010 winner Carlos Sainz and Dakar rookie (but 9-time WRC champion) Sébastien Loeb, the team has won four of the five stages run so far sweeping the top three positions twice. Loeb leads the rally with teammates Peterhansel and Sainz in second and third place 7:48 and 13:26 minutes behind respectively. The diesel-powered 4WD X-Raid Mini of 2011 and 2015 winner Nasser Al-Attiya is in fourth 14:16 behind the leader.

Tune in next issue for a follow up on the race results to see if Loeb or one of his Peugeot teammates were able to hold on for the win, or if Al-Attiya and his Mini could overtake them for back-to-back wins. While there is a possibility, one of the gas-powered racers could pull off an upset over the diesel-powered rigs, but we doubt that will happen as diesel has been the fuel choice of the past winners with the X-Raid Mini team winning the past four and VW winning with diesel Touareg's in the three years previous to those. **UDBG**





The people and machines behind the Peugeot dominance so far in the 2016 edition of the Dakar Rally.



The 2015 Dakar champion Nasser Al-Attiya in his diesel-powered X-Raid Mini is struggling to keep pace with the new and improved Peugeot racers in 2016.



2013 champion Eduard Nikolaev won stage 5 in the truck class with his massive Kamaz truck, but still finds himself 11 minutes adrift for the class lead with eight more stages of competition to go until the 2016 Dakar winner is determined.



Sebastian Loeb has been almost unstoppable during his rookie Dakar campaign in his Peugeot 2008 DKR thanks to its long travel 2WD suspension configuration and diesel 3.0L V6 twin-turbo winning 3 of 5 stages run as of press time.



This great looking Rudy's Edition Ford F-250 could be yours: It sports satin finish paint, a great looking wheel-and-tire combination, as well as a top notch BDS suspension system, and a lot of cool unique details like the painted grille and badges.



## RUDY'S EDITION FORD F-250 NOW AVAILABLE

**S**tearns Ford in Burlington, North Carolina, is now selling Rudy's Edition Ford F-250 trucks that put together a package that looks as good as it drives. The team at Rudy's Diesel Performance teamed with Stearns Ford to deliver customers much more than your basic dealership upgrades: wheels and tires with tinted windows and maybe pinstripes (you know those tape kind that you peel off as soon as you get the truck home anyway). Nearly every aspect of the truck gets the Rudy's treatment except for—oddly enough—the engine and transmission. You'll have to take it to them or another diesel performance shop to do powertrain upgrades after you sign on the dotted line. They do install a DPF-back Magnaflow exhaust system to give you a head start on the performance upgrades though.

Each truck starts by getting partially disassembled and repainted. Yes, they tear down and color, sand, then repaint the trucks with a satin clear finish to give them a unique look while maintaining the factory base color and corrosion protection. They also disassemble prep and paint the bumpers, mirror caps, badges, logos and grille assembly to make the truck unique and to compliment the revised paint finish. Of course, replacing the factory wheels and tires is something virtually

every owner does, so the Rudy's team addresses that area after installing a BDS suspension system complete with Fox Racing 2.0 shocks front and rear-to-clear larger 37-inch rolling stock. The wheel and tire combination they've selected uses 22-inch color matched American Force wheels wrapped in 37X13.50R22 Toyo M/T Open Country tires for great looks, performance and ride quality.

Moving inside the truck, they remove the basic plastic trim pieces from the dash and doors and paint them in a color matched satin finish paint to bring the updated exterior inside. They also embroider the front headrests and rear center headrest with a Rudy's Diesel logo before reassembling everything. To make it easier to get in and out of the big truck, they install a set of motorized AMP Research power steps that retract when the doors are closed to maintain the truck's clean lines. Take a quick peek at the shots we were able to capture after the Rudy's Truck Jam event in October 2015. If you like what you see, give the guys at Rudy's or Stearns Ford a call (RDP 866.757.6537 or SF 800.223.6951—Ed.) and they will have you rolling in a Rudy's Edition F-250 in no time. Just be sure to tell them that you heard about the truck in *Ultimate Diesel Builder's Guide*. **UDBG**



Up front, the BDS suspension uses long arms to give the truck more travel while maintaining good driving characteristics especially when combined with new coil springs and dual Fox 2.0-series shocks. The truck rolls on these great looking color matched American Force 22-inch wheels wrapped in 37-inch Toyo rubber.



In the rear, you can see the satin black Magnaflow DPF-back exhaust system as well as the great looking wheels and tires, but you may not notice that the suspension system uses replacement leaf springs rather than just sticking a big block under each spring.



Technically, the truck does come with a sticker kit, but this is so much nicer than those cheap pin stripes some dealers are trying to charge you for.





FOR ALL OF YOUR PERFORMANCE  
DIESEL NEEDS

COMING SOON:  
Cummins 4-bolt billet rods



bean's diesel performance



[bdpshop.com](http://bdpshop.com)



615-563-7800

## COMPOUND TURBO SYSTEM FOR JEEP GRAND CHEROKEE DIESEL

If you are interested in adding an extra 190 HP to the wheels of your Jeep Grand Cherokee EcoDiesel, so are the guys at Espos Diesel Performance in Plattsburg, New York. After successfully developing and testing the RamCharger compound turbo kit for the Ram 1500 EcoDiesel, they moved on to the Jeep Grand Cherokee and gave it a healthy boost with essentially the same system. Of course, the plumbing had to be reworked to fit under the hood of the Jeep, but Ryan Esposito tells us that the performance is virtually identical between the Jeep and the Ram.

The kit uses stainless steel hot pipes and polished aluminum cold pipes to plumb a Suncoast modified Borg Warner S362 turbo into a compound configuration with the factory turbo to make more boost and in turn...more power. To order a kit for your Jeep, contact Espos at 518.324.3776 and tell them that your friends at *Ultimate Diesel Builders Guide* sent you.

**UDBG**



Popping the hood on a Jeep Grand Cherokee equipped with an Espos Diesel Performance "RamCharger" compound turbo kit for its EcoDiesel reveals the enhanced 3.0L V6 diesel engine. All eyes are immediately drawn to the extra turbo in the front corner of the engine bay.



The Borg Warner S362 turbo charger is customized by the team at Suncoast with a billet compressor wheel and stainless steel Tial turbine housing with a V-band outlet. The crew at Espos wraps the stainless steel exhaust piping to keep the heat in the tubes and reduce underhood heat with the remote mounted turbo.

## ODSS 2015 AWARDS BANQUET

On December 15, 2015, the Outlaw Diesel Super Series wrapped up its inaugural season with the AirDog Championship Banquet & Award Presentation at the Wyndam Indianapolis West hotel in Indianapolis, Indiana. Awesome trophies were handed out along with the season championship winnings while all enjoyed a good meal. The crew at Cold Hard Art fabricated the custom trophies, and they are pieces of art any gearhead would love to put on their mantle. To see the final season standings for each class and to check out the 2016 event schedule point your browser over to [OutLawDieselSS.com](http://OutLawDieselSS.com). **UDBG**



The ATS sponsored 7.70 Index class attendees got together for a group photo after the award presentation.



BD Diesel Performance sponsored the 6.70 Index class. The racers enjoyed the company of their fellow racers as much as the cool trophies.



Of course, the go-fast Pro Street guys are all smiles. They put on some of the best racing all season long. We look forward to seeing how fast they will go next year.



The Pro Mod and Pro Dragster groups got together for their photo.



IS YOUR OLD ENGINE

# PISTON YOU OFF?



**DFCDIESEL**

ENGINES COME WITH A  
**POWERFUL** AND **PROVEN**

5 Year /  
160,000 km (100,000 mi)  
**WARRANTY**

CALL TOLL FREE NORTH AMERICA WIDE

**1-877-836-8341**

OR VISIT [WWW.DFCDIESEL.COM](http://WWW.DFCDIESEL.COM)

**TODAY**

TO LEARN ABOUT OUR  
STREET, TOW/HAUL & RACE SERIES  
DIESEL ENGINES

SETTING THE **STANDARD** FOR  
**REMANUFACTURING ENGINES** TO  
OUTLAST YOUR TRUCK, NOT THE  
**WARRANTY!**

**SPECIALIZING IN**

DODGE	5.9/6.7	94 - 14
FORD	6.0/6.4/6.7	03 - 14
CHEVY	6.6	01 - 10

**RÖTTLER**

**ARP**  
performance engine products

**MAHLE**

**GP**  
CARRILLO

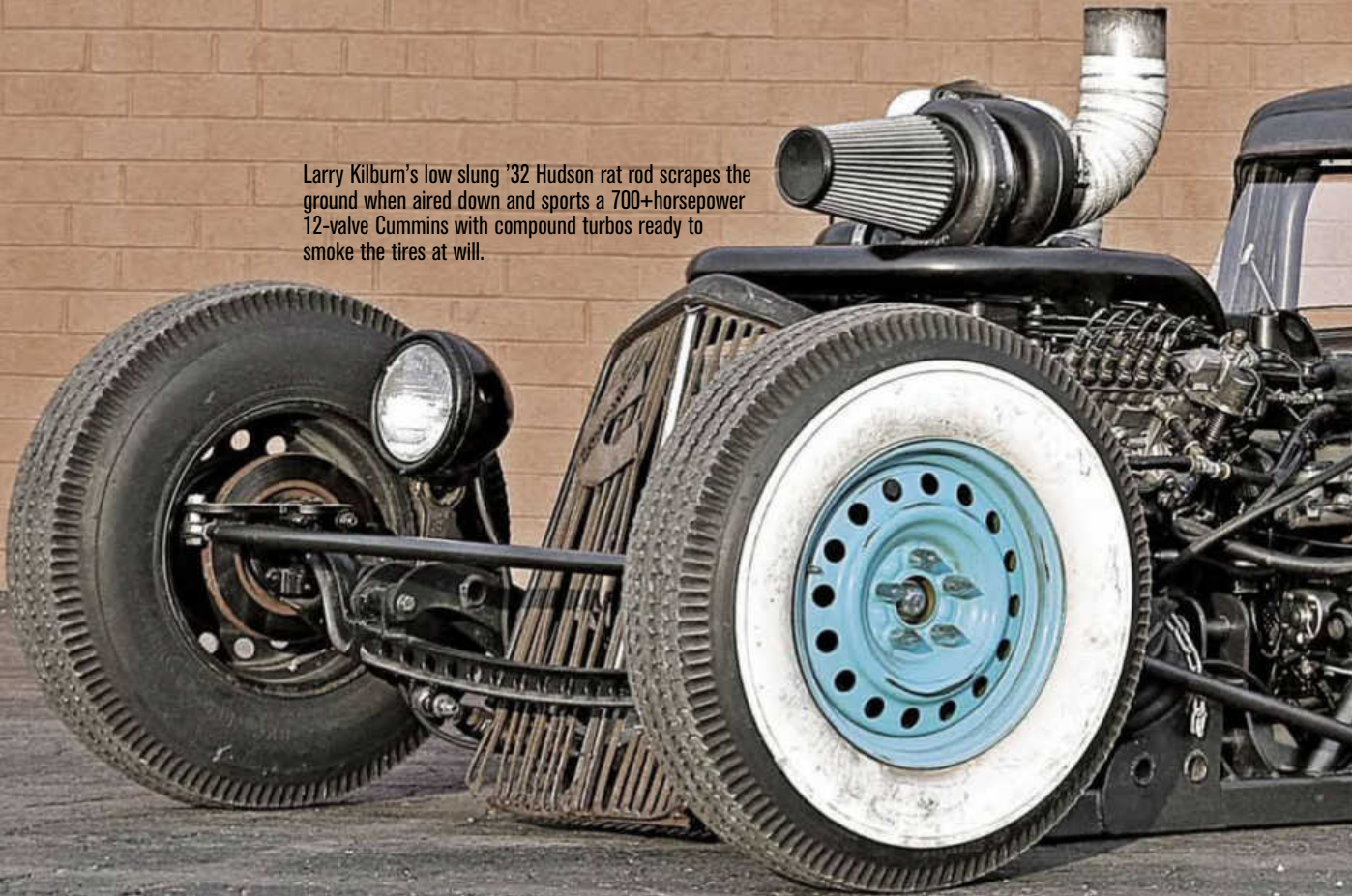
**SBI**



# RATICAL ROD

*Text and photos by  
Chris Tobin*

Larry Kilburn's low slung '32 Hudson rat rod scrapes the ground when aired down and sports a 700+horsepower 12-valve Cummins with compound turbos ready to smoke the tires at will.





# LARRY KILBURN'S WILD '32 HUDSON RAT ROD





The art of fabrication, design, welding, and hot rodding (on a budget as a DIYer) all come together to make rat rods. Who doesn't love to see the unique and sometimes wacky creations that builders invent? Larry Kilburn is an up-and-coming 21-year old mechanic that recently started his own shop, Kilburn's Kustoms, to showcase the amazing work he and his team turn out on a regular basis. This awesome '32 Hudson rat rod is a prime example of the top-notch fabrication and creative thinking that comes out of the Fort Pierce, Florida, shop. Kilburn and his team, including his father, Larry Sr., Timothy Meehan, and Joseph Manniello, completed the rat rod construction in about 8 months, debuting it in the show-n-shine competition at the 2015 Scheid Diesel Extravaganza where it won "Best Custom Diesel Vehicle."

After purchasing the 1932 Hudson Terraplane shell for just \$2,000, Kilburn and his team went to work giving it a new home on a completely fabricated chassis. They started with sticks of 2x3-inch rectangular tubing with a hefty 1/4-inch wall thickness to give the chassis a compact but rigid structural foundation. To strengthen the chassis and allow the suspension and drivetrain to be bolted into it, they used a combination of plate steel and tubular round steel forming mounts, as well as a full roll cage to make sure the occupants stay safe within the confines of the 83-year old body shell.

In keeping the rat rod somewhat traditional, it runs on a Model A straight axle front end, but the way it connects to the chassis is far from traditional. Kilburn and his team fabricated a cantilever suspension design with Accuair 2500-lb. air bags on each side to control the front ride height and provide a smooth ride when cruising at rod runs, diesel events, or just running around in the Hudson. The rear features a Ford 9-inch axle held in position under the fabricated frame rails with a double triangulated 4-link setup fabricated by Kilburn and his crew. Another pair of airbags is used in the rear to determine ride height and smooth out bumps in the road. They set up both the front and rear suspension travel to allow the frame to lay flat on the ground when the airbags are deflated, but he can easily inflate the bags to bring the rod up to ride height for cruising.

The front end of the rod rolls on B.F. Goodrich Silvertown 7.50-16 wide white-

While the big Cummins engine dominates your view, the bold wide-white wall front tires and custom painted old-school "steelie" wheels give the rat rod a distinctive look.



Looking at the passenger side of the engine you can see the GPI Racing aluminum radiator and electric fan stuffed behind the grille shell, as well as the slick copper tubing used for the turbo oil return lines.



Plenty of #2 fuel is delivered to the engine from the Bosch injection pump, thanks to 5K governor springs, 191 delivery valves and a dual feed setup to the pump that in turn feeds a set of 5X.018 injectors. You can also see the custom intake manifold they built to channel the compressed charge into the cylinder head.



The top of the engine is dominated by a pair of Borg Warner turbos with an S480 and S363 combining to give the engine plenty of boost. The fabricated mount features a Cummins "C" cut into the metal plate and the hot pipes are wrapped in header insulation. A 13mm wastegate is used to keep the boost from exceeding Kilburn's operating window.





wall tires from Coker Tire that are wrapped around 16-inch steel wheels painted distressed aqua. In back, Kilburn opted for a pair of modern Nitto NT420S 285/50R20 tires wrapped around 20-inch steelies that were also treated to the distressed aqua paint finish.

Moving inside the Hudson, the team fabricated a roll cage to keep the occupants safe in the event of an accident on the road, since it is so much smaller and lighter than most of the cars on the road today. The cage is tied into the chassis at ten different points and uses

To keep an eye on the rod's vitals, Kilburn relies on a set of eight Auto Meter gauges mounted in a fabricated steel panel welded to the top front roll bar hoop. The eight Auto Meter gauges are joined by an air pressure gauge in the center to monitor pressure avail-



When you look closely at the chassis, you can see the wild custom work Kilburn and his crew at Kilburn Kustoms did fabricating the custom cantilever front suspension design, making it strong, attractive, and very functional.



Check out the headlight mounting arm. We love when fabricators make use of things in a unique and creative way, such as, using a piston rod to mount your headlights. You can also see that the '32 sports modern disc brakes to help make it much more enjoyable and safe to drive in modern traffic.



The grille shell is enhanced with a Cummins "C" as if there were any doubt as to the engine manufacturer. It looks like the view out the windshield might be slightly obstructed.

Both front and rear wheels are each secured with five lug nuts dressed up with chrome spike lug nut covers. The fenderless front and rear wheels give the car a real rod feel and an intimidating look balanced by the playful wheel color.

With the chassis and suspension wrapped up, it was time for the builders to focus on mounting the 83-year old body onto the freshly fabricated chassis. Since the body was just a shell, Kilburn and his team had to fabricate body mounts as well as the floor and firewall. They setup the body to match the frame in the rear and touch the ground when the suspension is aired down. Up front, there is just enough clearance to open the suicide doors when the frame is sitting flat on the ground. The all-original steel body was stripped of what remaining paint it had; then some basic patchwork repairs were made by welding in steel panels where necessary. Despite the body's short stature, the crew at Kilburn's Kustoms did not chop the roof, and it retains its original 1932 dimensions. To preserve the patina but prevent the metal from rusting away entirely, they sprayed the body with clear for protection from the elements. An acrylic windshield is installed in the body with a piano hinge securing it at the top and springs securing the sides, allowing Kilburn to pop out the bottom for additional fresh air during the hot Florida summers.

cross bars and bracing tubes throughout to strengthen the cage and chassis as a whole. Once the cage was welded into the car, the team fabricated the floor, firewall, and rear package tray and transmission tunnel with welded sheet metal. Continuing with the metal theme, they installed a set of Iron Ace Hot Rod welded metal seats with a padded seat and bare metal back with a set of four-point harnesses to keep the occupants in the seats. Kilburn installed a pair of headrests on the roll cage cross bar behind the seats to keep the driver and passenger from bumping their heads on the roll bar. The headrests feature gray leather with red stitching at the seams and a red embroidered FFS (Far From Stock) logo to really make them pop inside the cabin.



able in the air tank to supply the air bag suspension. The build team mounted the air tank in the rear of the cabin along with a pair of Vair compressors and a pair of Red-Top Optima batteries visible through the windowless rear openings along with the roll cage tubing. A fabricated steel transmission tunnel houses a Precision Performance Products Kwik Shift II shifter and leads up to a steel dash panel that houses the starter button and switches to control the air suspension. Steering chores are handled by a vintage 4-spoke steel Model A steering wheel with a piston inspired skull plasma-cut from plate steel installed as a center cap with the mounting bolts acting as eyes. Rather than installing a sound system, Kilburn chose to be entertained by the roar of the Cummins and rush of the wind. The door panels are upholstered in brown alligator skin material to give the interior another unique touch.

The most obvious feature of this unique build is the 12-valve Cummins and its two massive Borg Warner turbo charges sitting out in the open between the custom frame rails. Kilburn and his team built the engine themselves starting with a Cummins out of a 1998 Dodge truck then stripped it down for a performance rebuild. While the bottom end remains stock with a factory crank swinging factory rods and pistons, the build team installed a new bump-stick from Hamilton Cams to actuate the valves. Before reinstalling



Nine gauges are housed in a roll bar mounted panel above the windshield to keep track of the cars vitals.



The sparse interior is simple yet functional with a roll cage and four-point harnesses for protection and minimal Iron Ace Hot Rod seats to keep the driver and passenger in place as they fly down the road. The Precision Performance Products gated shifter helps make sure that Kilburn doesn't accidentally grab the wrong gear.



A four-spoke steel Model A steering wheel is used to keep the rod pointed in the right direction, but we don't think the skull center was standard issue for Model As. Starter, ignition, and air suspension control switches are mounted in the steel dash panel located between the crossbar and transmission tunnel.

the head, the block and head were machined for O-rings to withstand higher cylinder pressure; they also installed a set of 110# Hamilton Cams valve springs to prevent valve float under high boost pressure.

To reach their power goal of around 700-horsepower, the build team opted to go with plenty of fuel combined with plenty of air. On the fuel side of the equation, they used an AirDog 165 pump/filter system installed under the rear of the car to deliver fuel from the rear mount fuel cell to dual feeds on the Bosch P-pump on the Cummins engine. The injection pump is enhanced with 5K governor springs to allow the engine to rev higher and 191 delivery valves to send plenty of fuel to each of the 5X.018 injectors in the cylinder head.

On the air side of things, the build team went with a Borg Warner compound turbo setup that feeds directly into the head without an intercooler. Spent gasses are sent out of the engine through a three-piece manifold that feeds the S363 turbine through a diverter and 13mm wastegate that comes into play if the boost gets too high. Then exhaust gasses are carried up to the S480 through a wrapped hot pipe that also flows into the mounting plate and features a Cummins "C" cutout. The S480 is oriented for the exhaust to exit rearward through a 90-degree bend then fire up into the sky. Intake air is sucked into the S480 compressor through an open element aFe cone air filter before it's compressed and sent over to the smaller S363 compressor. The compressed intake charge is then sent over to the intake on the Cummins head through a

*With a haze rising from the stack and plumes of white smoke billowing off the rear tires, you can tell that Kilburn enjoys driving his big power in a small package rat rod.*





Rather than have custom replacement glass made for the 84-year old Hudson, Kilburn and his crew cut a sheet of acrylic to fit the windshield opening and mounted it with a piano-hinge to vent the bottom for additional airflow while cruising during the hot Florida summers.



Kilburn and his team installed a Red Top Optima battery on the shelf inside each rear window; you can also see the air tank and pair of Viar air compressors toward the rear.



Kilburn installed a set of 285/50R20 Nitto NT420S tires wrapped around 20-inch "Steelies" to maintain that high-boy rat rod look with the tires reaching well above the lower edge of the window opening when the suspension is aired down.



custom dual outlet pipe to help with air distribution between the cylinders.

The Cummins is linked to a Dodge 47RE transmission that was built by Sam Barbuto at Meehan's Automotive in Port Saint Lucie, FL. He stuffed the slush box with performance goodies, such as, a manual valve body and upgraded clutches throughout. Power is transferred from the engine to the transmission through a stock flexplate and FTI Performance billet single disk torque converter. Output from the transmission is handed off to a Ford 9-inch rear axle through a custom driveshaft. The rear end sports 4.11 gears and a welded factory differential to get the lightweight rat rod up and moving quickly; it also has disc brakes to slow the rod down.

Kilburn set out to make a statement with this rat rod—he wanted it to turn heads and to show off the capabilities of his shop; we'd say his mission was accomplished. The car draws attention wherever he drives it and not just from diesel guys. Gear heads from all walks of life love the car and want to check it out. He took home winning hardware at the Rat Rod Invasion in Daytona Beach, making 2015 a great year for his latest creation. If you get a chance to check it out in person, do it. You'll be glad you did. **UDBG**

The rod has a great look from the rear scraping the body on the ground when the suspension is deflated. Notice the seven LEDs used as tail-lights on each side of the rear panel below the body molding line.



The Hudson features suicide doors that are covered with brown alligator skin inner door panels to give the interior distinctive style.



We shoved our Canon under the rear of the rat rod to capture this shot of the four-link rear suspension and the 9-inch rear end. The fuel cell is located behind the rear axle, and you can see the bottom of the filters for the AirDog 165 pump/filter system behind the drive shaft.



It may still sit low, but when the suspension is raised to ride height, there is enough ground clearance to drive just about anywhere as long as there are no mountain-sized speed bumps.







-Looking for a Reliable Source for High Quality,  
America-Made Racing Parts?

-One that Offers Prompt & Affordable Shipping?

-Is Technical Support Important to You?

**Then Depend on Good Vibrations!**

We strive to provide premium supercharged & injected products at discounted pricing without sacrificing customer service



**Empowering  
Racers  
Since 1989**



New Racing Products  
Used Performance Parts  
Free Technical Advice  
Online How-To-Videos  
Free Racing Classifieds



View or Download our  
Performance Catalog!



*Factory Authorized, Stocking Dealer of these Performance Brands!*



**\$10 off 1st Web Order! Code: 9210 | DragParts.com | Toll Free 800.576.7661**



# GM TRANS TRICKS

## Allison Transmission Cooling Upgrades

TEXT/PHOTOGRAPHY: BY CHRIS TOBIN

It's common knowledge that heat is the worst enemy of an automatic transmission. Excessive heat can destroy a professionally built, high-performance transmission or any other slushbox in a short amount of time. Heavy towing, restricted airflow and high outside temperatures are probably the most prevalent causes of transmission overheating, but of course, drag racing and sled pulling are high on the list as well. Also, diesels with much more torque will cook a trans quicker due to clutch wear, etc.

A simple solution for GM truck owners is a handful of bolt-on items that will reduce the heat and add more fluid to the system. Pacific Performance Engineering (PPE) has developed upgraded transmission coolers and cast aluminum transmission pans for Allison-equipped Duramax trucks to help reduce the heat. Transmission cooler kits are available for LB7 or LLY '01 to '05 trucks as well as for LBZ or LMM '06 to '10 trucks and come with the necessary mounting hardware and brackets to install the performance cooler in the stock locations.

PPE offers Allison transmission pans in standard depth with external cooling fins or a heavy-duty deep configuration with internal and external cooling fins and an additional four quarts of transmission fluid capacity. The pans are available in a raw aluminum finish or a black-coated finish with or without brushed fins.

To keep the Allison transmission in our old '01 Silverado nice and cool, we opted to test out the PPE transmission cooler kit, which replaced the factory cooler that was leaking anyway. While an extra gallon of trans fluid would be nice, we also opted for a standard-depth pan, which still offers improved strength and cooling over the stamped steel pan, but does not protrude below the cross-member.

With our new PPE parts loaded up, and plenty of Royal Purple Max ATF on hand, we took the big Chevy up to RLC Motorsports in Cookeville, Tenn., for the installation. Shop owner Michael Dalton put the truck on the lift to make it easier to work on and easier for our camera to document the installation.



The cast aluminum transmission pan from PPE is available in standard depth (shown here) or deep that holds an extra four quarts of ATF. Both pans offer more strength and better cooling than the stock stamped steel pan.



To help keep the transmission cool, PPE offers this upgraded Setrab transmission cooler with custom brackets to install in the stock location on your Duramax truck.





**01** You may not have even realized it was there, but the factory transmission cooler is lurking behind the factory grille as seen by the arrow.



**02** To get to the cooler, the grille and plastic radiator top cover must be removed and set aside while working on the truck.

Since the install is super-easy, one that you can do yourself, having a jack and jack stands to get under the truck to safely drain the fluid and swap out the transmission pan is a good recommendation. In addition to a case or so of ATF, having the pan off also makes it a good time to change both the external and internal transmission filters. Make sure you get factory replacements.

Typically a drain and refill with filter changes will take just under eight quarts of ATF, but if you're changing the cooler at the same time like we did on this truck, plan on using an additional quart or two due to the loss from the cooler and lines. Speaking of the transmission cooler lines, the factory lines have been known to develop leaks where the flexible hose is crimped onto the hard line especially in cold climates. Merchant Automotive offers a retrofit kit to replace the leak-prone section with new hose and threaded fittings or you



**03** As can be clearly seen here, the small factory transmission cooler on our Duramax truck has seen better days; it's leaking from one or both fittings and really isn't up to the task of keeping a high-performance Allison cool when churning up the dirt with 37-inch tires.

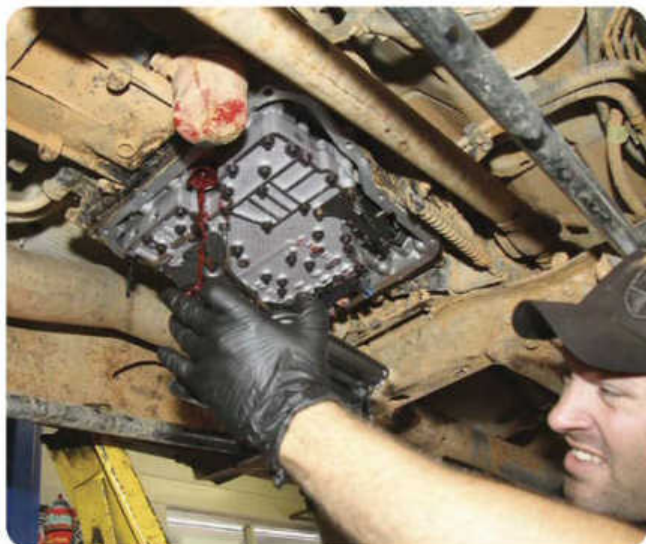


**04** Installing the transmission pan can be done without a lift, but it sure makes it easier to work on if you have access to one. It also allows us to take the photos while the RLC Motorsports team is working on the truck.





**05/06** After lifting the truck in the air and allowing it to cool for a little while, Michael Dalton drained the ATF before removing the mounting bolts securing the pan to the transmission case. He carefully removed the pan and reusable factory gasket.



**07** Watch out when removing the internal filter, there's still ATF in the transmission that will come spilling out and make a mess if you're not careful.

can replace leaking cooler lines with new GM lines.

Installing the cooler requires removing the plastic upper radiator cover and the grille assembly to get to the cooler mounts and lines. The PPE kit comes with new brackets and mounting hardware along with a high-performance Setrab cooler. PPE pre-installs the proper fittings into the cooler to mate with the factory cooler lines, making the install very quick and easy. Use care when removing the spring clips that lock the cooler lines into the cooler, as they like to fly across the shop and are easily lost.

If you're just installing the pan and cooler and don't have to mess with the lines, you can finish the installation in a couple hours using standard tools and shop procedures. Be sure to give yourself some extra time if you're replacing or repairing the cooler lines, as they can be difficult to fish in and out of the truck.

Sometimes, it's the simple things that make a big difference, and



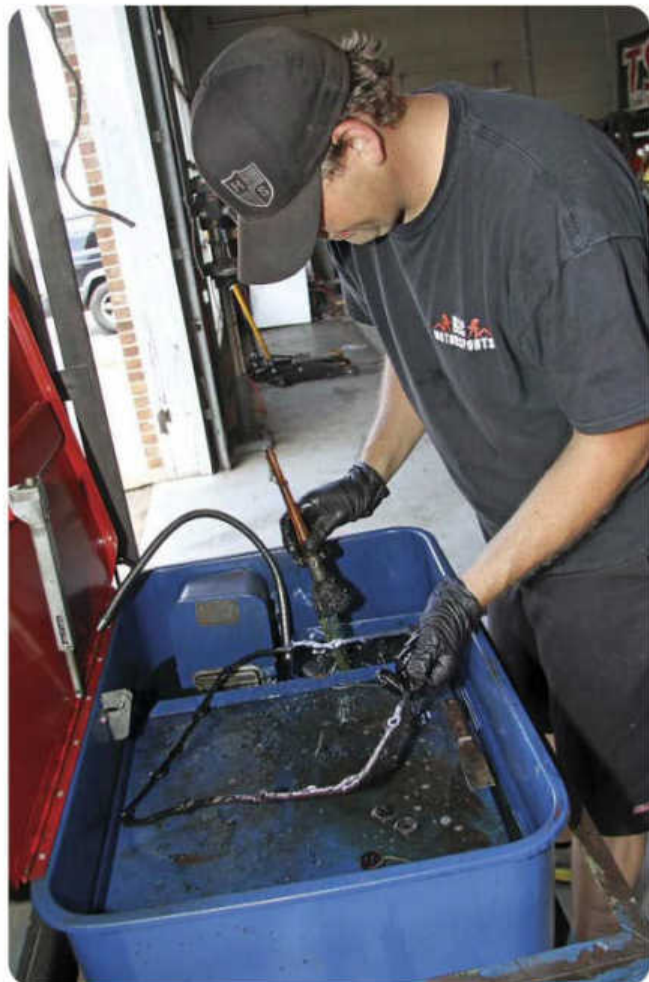
**08** Before installing a new internal filter, make sure that the seal is removed from the transmission. Dalton had to use a pick tool to pry it out of the bore.



**09** Before installing a new spin-on external filter, Dalton fills it with Royal Purple Max ATF.



adding extra cooling capacity to any automatic is solid advice. With the upgrades in place, including the synthetic trans fluid, we saw a reduction in overall trans operating temps, via the factory gauge of 30 degrees. So if you have a D-Max with an Allison, the PPE upgrades will be worth the investment. **UDBG**



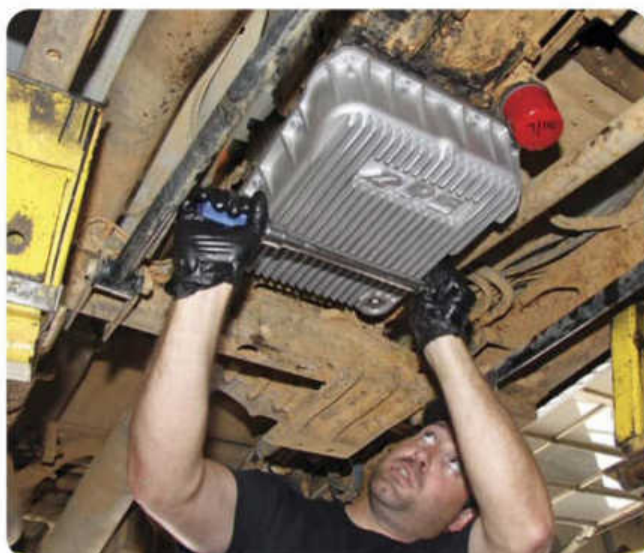
**10** Boz Henry used the shop parts washer to thoroughly clean the reusable factory pan gasket before installing the new pan. If you don't have a parts washer you can use a clean rag and brake cleaner spray to clean the gasket.



**11** Looking at the stamped steel factory pan next to the cast aluminum PPE pan, it's easy to see that the PPE pan is stronger than the original pan. It also has fittings for a transmission temperature gauge sender and a very strong magnetic drain plug.



**12** Since the PPE pan is pretty heavy (especially if you're using the deep pan) it may be easier to get the supplied Allen head mounting bolts started with a friend holding the pan as we see here with Henry and Dalton.

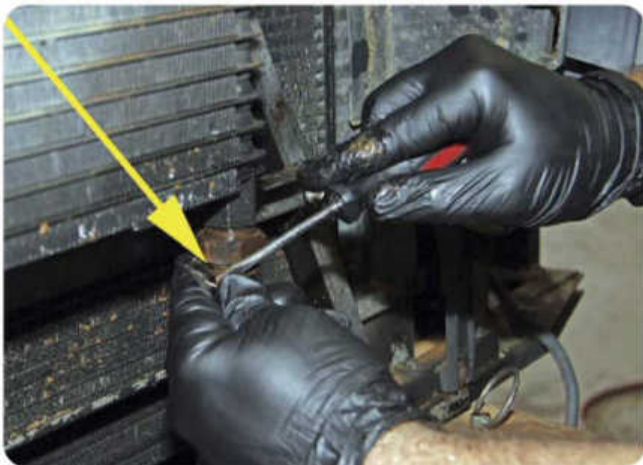


**13** After all the bolts are installed, Dalton torques them to the recommended 15 ft-lb. in the order shown in the installation manual.



**14** The completed new pan looks great on our dirty old Allison, and we're sure it will provide years of service for the truck. The low-profile pan does not hang down too low, and we expect that it will be fine for off-road racing, but we may still fabricate a skid plate just in case.





**15** When removing the lines from the transmission cooler, be very careful not to lose the spring clip retainers as they have a habit of shooting across the shop or garage and getting lost.



**16** After both lines are disconnected, Dalton removed the mounting bolts to remove the cooler from the truck.



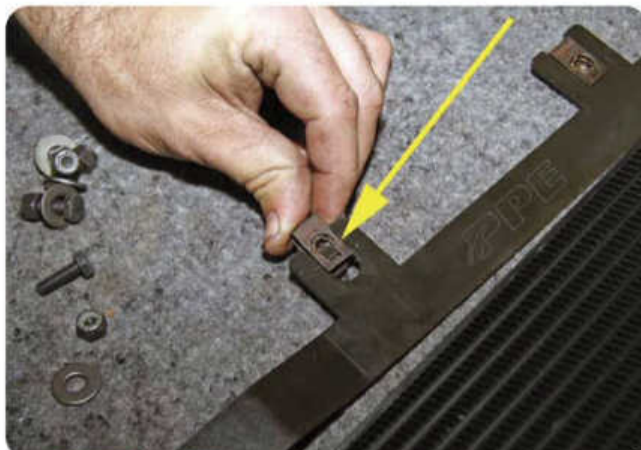
**17** If your cooler lines are anything like ours, you may want to take the time to remove and replace them or rebuild them to fix or prevent leaks. We opted to replace our lines with a new set of factory lines.



**18** Merchant Automotive offers this transmission cooler line repair kit to replace the factory-crimped sections that are prone to leaking (especially in cold climates).



**19** After cutting the hard line about 1/2-inch from the crimp, the new section is inserted between the hard lines and the nuts are tightened for a permanent seal on the hard lines.



**20** The clip-on slide nuts from the original cooler are reused on the PPE upper mounting bracket to install it in the truck. Dalton installed the nuts before installing the bracket on the cooler.





**21** Side by side, it's clearly evident that the Setrab cooler used in the PPE kit is larger and has much more cooling capacity than the original cooler with nearly three times the number of cooling passages than the factory cooler.



**22** Using the supplied mounting brackets, the cooler mounts securely in the factory location in front of the A/C condenser.



**23** PPE supplies the cooler with factory-style connectors preinstalled so the cooler lines simply plug into the cooler just like it was a factory cooler.



**24** Don't forget to install the new spring clip retainers and then slide the plastic cooler line covers into position to prevent the clips from being dislodged.



**25/26** Then Dalton tightened the mounting hardware and reinstalled the grille to complete the cooler installation.



**27** Before starting the truck, Dalton refilled the transmission with about nine quarts of Royal Purple Max ATF to make sure it's well lubricated and continues to live a long and healthy life. Then he started the truck and carefully checked for leaks at all of the line fittings and around the pan and filter before sending us down the road again.

**SOURCES:** ▶ Merchant Automotive [merchant-automotive.com](http://merchant-automotive.com) 866.399.7169

▶ Pacific Performance Engineering [ppediesel.com](http://ppediesel.com) 714.985.4825

▶ RLC Motorsports [rlcmotorsports.com](http://rlcmotorsports.com) 931.526.5956

▶ Royal Purple [royalpurple.com](http://royalpurple.com) 888.382.6300





# BULLET PROOF DIESEL™

.COM

## EVERY 6.0L OWNER NEEDS TO BULLET PROOF

**Monitoring what is going on under the hood is critical to your engine health.** To prevent engine problems it is important to monitor several parameters such as: FICM voltage, engine oil temp (EOT) and engine coolant temp (ECT). Visit our website or call us to learn more!



### Scan Gauge

Connect the Scan Gauge II to your vehicle through the OBDII port using the included cable, turn the ignition key on and the ScanGauge II automatically connects to your truck's internal computer - it's that easy! Comes pre-programmed to work with your 6.0L BulletProofDiesel.com Search: SCAN



### EDGE Insight CTS

The EDGE CTS is a fantastic tool for monitoring your truck. The graphics are clear with vivid color and a responsive touch screen that is easy to use. You can easily display up to 8 different parameters including EGT with the optional EGT Probe kit. \*EGT Probe kit is sold separately. BulletProofDiesel.com Search: CTS

## BULLET PROOF DIESEL CUSTOM APPLICATIONS

CUSTOMIZE



### Did you know?

Did you know that Bullet Proof Diesel now offers a complete line of products to customize your oil cooler?

While designed for the experienced enthusiast who prefers to move away from OEM design, the engraved port descriptions are an excellent addition for enabling a novice to pursue a custom set up.

We also offer a variety of fittings and hoses as well as delete plates for both the 6.0L and the 6.4L.

BulletProofDiesel.com Search: Custom

480.247.2331

888.967.6653

BULLETPROOFDIESEL.COM



# IF YOU DEPEND ON IT, **BULLET PROOF IT**



Photo Courtesy of Icon Media Studios



## BAJA TESTED

## SOLUTIONS

### BULLET PROOF DIESEL EGR COOLERS

DIRECT REPLACEMENT OF OE PART NO MODIFICATIONS NEEDED

Our EGR Coolers are fixed right with a better design that is all stainless steel, rugged and welded.

LIFETIME PARTS WARRANTY

PRICES STARTING AT \$350

BulletProofDiesel.com Search: EGR



### BULLET PROOF DIESEL OIL COOLER SYSTEM

THE SOLUTION FOR YOUR  
OEM FORD ENGINE OIL COOLER

Advantages of our oil cooler include:

- More effective engine oil cooling
- Better cooled filtered oil for your injectors, high-pressure oil pump and turbo
- Eliminates engine oil in your coolant by way of a ruptured OEM engine oil cooler
- Reduced engine oil temperatures
- Improved cooling of the EGR cooler, leading to increased EGR cooler longevity
- Compatible with the optional Bullet Proof Diesel oil bypass filtration kit with up to 2 micron Amsoil filtration

\* Optional cold weather kit available

PRICES STARTING AT \$1,595 F-SERIES & \$2,195 E-SERIES

BulletProofDiesel.com Search: OIL



## GET TECH TIPS • BUY PARTS • FIND INSTALLERS



@BULLETPROOFDESL

# TECH ▶ DYNO-PROVEN

Text and Photos by UDBG Staff

## 8 TRUCKS SPIN THE ROLLERS AND WE SHOW YOU A PEEK AT THEM

**D**yno competitions are a common occurrence at diesel events across the country, in many cases, as a secondary attraction to the main event of sled pulling or drag racing, but sometimes the dyno competition is the main show. One such case is the Judgement Day event that Thoroughbred Diesel has annually at their

shop in Winchester, Kentucky. Diesel enthusiasts bring their trucks from far and wide to get their chance to run on the rollers of the Thoroughbred Diesel Mustang chassis dyno along with a large following of diesel fans that come to check out the action. More than 40 trucks rolled across the dyno on a rainy October 3rd last year, and we se-



## 955-HP CHEVY

**OWNER:** TOMMY HAGER **HOMETOWN:** Big Spring, KY **TRUCK:** 2006 Chevrolet

**BUILDER/SHOP:** Blackout Diesel Performance and others

**ENGINE:** 6.6L Duramax LBZ with Mahle pistons, Carrillo rods and alternate fire PPE camshaft

**TURBO(S):** Single; Fleece Performance Engineering S475

**FUEL UPGRADES:** FASS pump/filter system, Wehrli Custom Fabrication dual CP3 and F1 injectors

**AIR UPGRADES:** Wehrli Custom Fabrication intake, WCF intercooler tubes and modified Spearco intercooler

**NITROUS:** Yes

**EXHAUST UPGRADES:** PPE manifolds with homemade hood stack turbo outlet

**TUNING:** EFILive by Fleece Performance Engineering

**TRANSMISSION:** Allison built by Blackout Diesel Performance with Diesel Performance Converters billet torque converter

**MAX HORSEPOWER:** 955.6 HP

**MAX TORQUE:** 1,696.2 lbs-ft.

**WHY DID YOU BUILD THE TRUCK?** I built the truck as a hobby to fulfill my adrenaline needs after I quit racing motocross. I built this one as a drag racing/towing truck but the more I raced it the faster I wanted to go so as of now it is no longer a towing truck but strictly a street/strip truck. Since the Thoroughbred event I have upgraded to a compound turbo charger setup and estimate that it is now making around 1,200 HP. We are also replacing the Allison transmission with a Firepunk built 48RE and shooting for 6-seconds in the 1/8-mile.





lected eight great examples that competed in the Stock and Unlimited classes to show you a peek under the hood as well as some insight into their powerful combinations.

The selection of trucks shown here includes three Cummins Dodges, two Power Stroke Fords, two Duramax Chevys and a Fummins with power levels ranging from just under 500 horsepower to nearly 1,000 horsepower. The cumulative horsepower of the eight trucks is 5,841.4 HP while the combined torque is 10,483.4 lbs-ft. and the average is 730 HP and 1,310 lbs-ft. of torque. Owners gave us some of the details on the dyno-proven setups in their trucks that

can be used to help steer you in the right direction when deciding what upgrades you want for your own truck. Of course, a parts list is no match for hands-on experience and suggestions from your local diesel performance shop when deciding what's best for your particular application. Use these trucks as inspiration for your build while working with your local shop to come up with a combination that will handle everything you want from your truck. Maybe after you're finished with your build, you'll find it here on these pages just like these proud owners. **UDBG**

**SOURCE:**  Thoroughbred Diesel 866.737.4966 [ThoroughbredDiesel.com](http://ThoroughbredDiesel.com)



## 494-HP DODGE

**OWNER:** JAMES CLINE **HOMETOWN:** Cabin Creek, WV **TRUCK:** 2006 Dodge Ram 2500

**BUILDER/SHOP:** Owner built

**ENGINE:** 5.9L Cummins common rail with stock internals

**TURBO(S):** Single; Factory

**FUEL UPGRADES:** None

**AIR UPGRADES:** S&B cold air intake and aFe intake manifold

**NITROUS:** No

**EXHAUST UPGRADES:** 5-inch turbo back

**TUNING:** Efilive by Ryan Milliken, Hardway Performance

**TRANSMISSION:** NV5600 swap built by Parker Earp at Dark Cloud Diesel Performance with a South Bend dual disk 3850 clutch

**MAX HORSEPOWER:** 494.6 HP

**MAX TORQUE:** 950.9 lbs-ft.

**WHY DID YOU BUILD THE TRUCK?** I built my truck because my dad brought me up around his diesel truck, and he loved it and that gave me the inspiration to want to get a Dodge with a Cummins diesel and make it my own like he had done.





## 591-HP FORD



**OWNER:** COLT MINTON **HOMETOWN:** New Market, TN **TRUCK:** 2010 Ford F-250

**BUILDER/SHOP:** WAR Diesel Recovery

**ENGINE:** 6.4L Power Stroke with stock internals

**TURBO(S):** Factory style compound; BD Diesel Performance

**FUEL UPGRADES:** 60% over RCD injectors and AirDog II 165 pump/filter system

**AIR UPGRADES:** aFe cold air intake

**NITROUS:** No

**EXHAUST UPGRADES:** DPF back

**TUNING:** H&S MiniMax

**TRANSMISSION:** Suncoast comp 5R transmission with a Precision Industries triple disk torque converter

**MAX HORSEPOWER:** 591.5 HP

**MAX TORQUE:** 1,073.6 LBS-FT.

**WHY DID YOU BUILD THE TRUCK?** We built the truck to have one—if not the top—horsepower Ford around the local Tennessee shows. We actually just pulled the cab and motor hoping to upgrade more and break 1,000 HP on fuel in 2016.





## 661-HP DODGE



**OWNER:** CHRISTOPHER ALMEIDA **HOMETOWN:** Cynthiana, KY **TRUCK:** 1997 DODGE RAM 2500

**BUILDER/SHOP:** Houdini Diesel Performance

**ENGINE:** 5.9L Cummins with .020 over Mahle pistons, Hamilton camshaft, 110# valve springs, ported and polished head with O-rings

**TURBO(S):** Compound; 64/HT3B

**FUEL UPGRADES:** FASS 275 pump/filter system and 5X.022 DDP injectors

**AIR UPGRADES:** Custom fabricated intake manifold and On 3 Performance intercooler

**NITROUS:** No

**EXHAUST UPGRADES:** 5-inch turbo back

**TUNING:** None

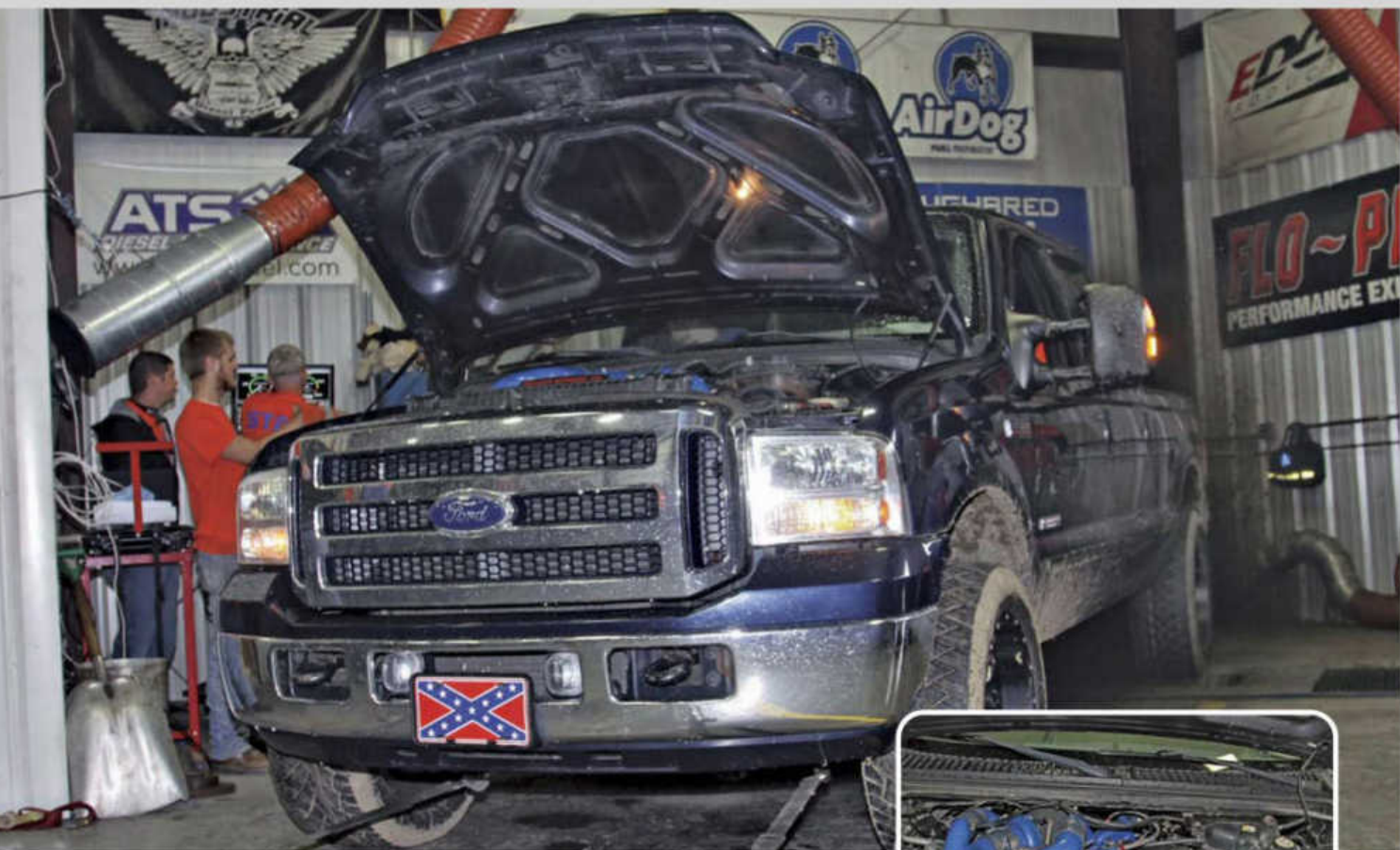
**TRANSMISSION:** 2001 Dodge 6-speed manual with Kenny's Pulling Parts double disk clutch

**MAX HORSEPOWER:** 661 HP

**MAX TORQUE:** 1,257 lbs-ft.

**WHY DID YOU BUILD THE TRUCK?** I've always had the dream, and a love of trucks since I was a kid as my dad always had trucks, and I grew up around them. After high school, I became good friends with Ethan Prows (owner of Houdini Diesel Performance) who helped me build the engine in the truck, and I was always adding parts and always wanted more until I got to the point we are today with the truck. But there is probably still more to come...





## 702-HP FORD



**OWNER:** DAKOTAH SAMPLE **HOMETOWN:** Louisville, KY **TRUCK:** 2004 Ford F-250

**BUILDER/SHOP:** Owner built

**ENGINE:** 6.0L Power Stroke with stock internals and ARP 425 head studs

**TURBO(S):** Compound; Precision Turbo Dual BB 62/76

**FUEL UPGRADES:** Home built A1000 pump fuel system and RCD 205/100 injectors

**AIR UPGRADES:** Banks Power intercooler and High-Ram intake

**NITROUS:** No

**EXHAUST UPGRADES:** Black Widow Custom Fab

**TUNING:** SCT tuner with custom Bearhead tunes

**TRANSMISSION:** Owner built 5R110 with Raybestos GPZ frictions and Kolene steels, new solenoids from Go-Go Diesel and Precision Industries 2,200 RPM stall torque converter

**MAX HORSEPOWER:** 702.8 HP

**MAX TORQUE:** 1,211.1 lbs-ft.

**WHY DID YOU BUILD THE TRUCK?** I built the truck to show my father we could reach and exceed his original power/towing goals after dad bought the truck new in 2004 then lost faith in it and sold it to me and then bought a 6.7L Cummins for himself. I did the research and work myself showing that a 6.0H can do all he wanted and then some.





## 638-HP CHEVY



**OWNER:** CARSON HALL **HOMETOWN:** Taylorsville, KY **TRUCK:** 2006 Chevrolet 2500 HD

**BUILDER/SHOP:** Fleece Performance Engineering

**ENGINE:** 6.6L Duramax LBZ with stock internals

**TURBO(S):** Single; Fleece Performance Engineering 63mm Cheetah

**FUEL UPGRADES:** AirDog II 165 pump/filter system and 60% over Exergy injectors

**AIR UPGRADES:** S&B cold air intake and aFe intercooler tubes

**NITROUS:** NO

**EXHAUST UPGRADES:** Turbo back exhaust and BD Diesel manifolds

**TUNING:** EFILive by Fleece Performance Engineering

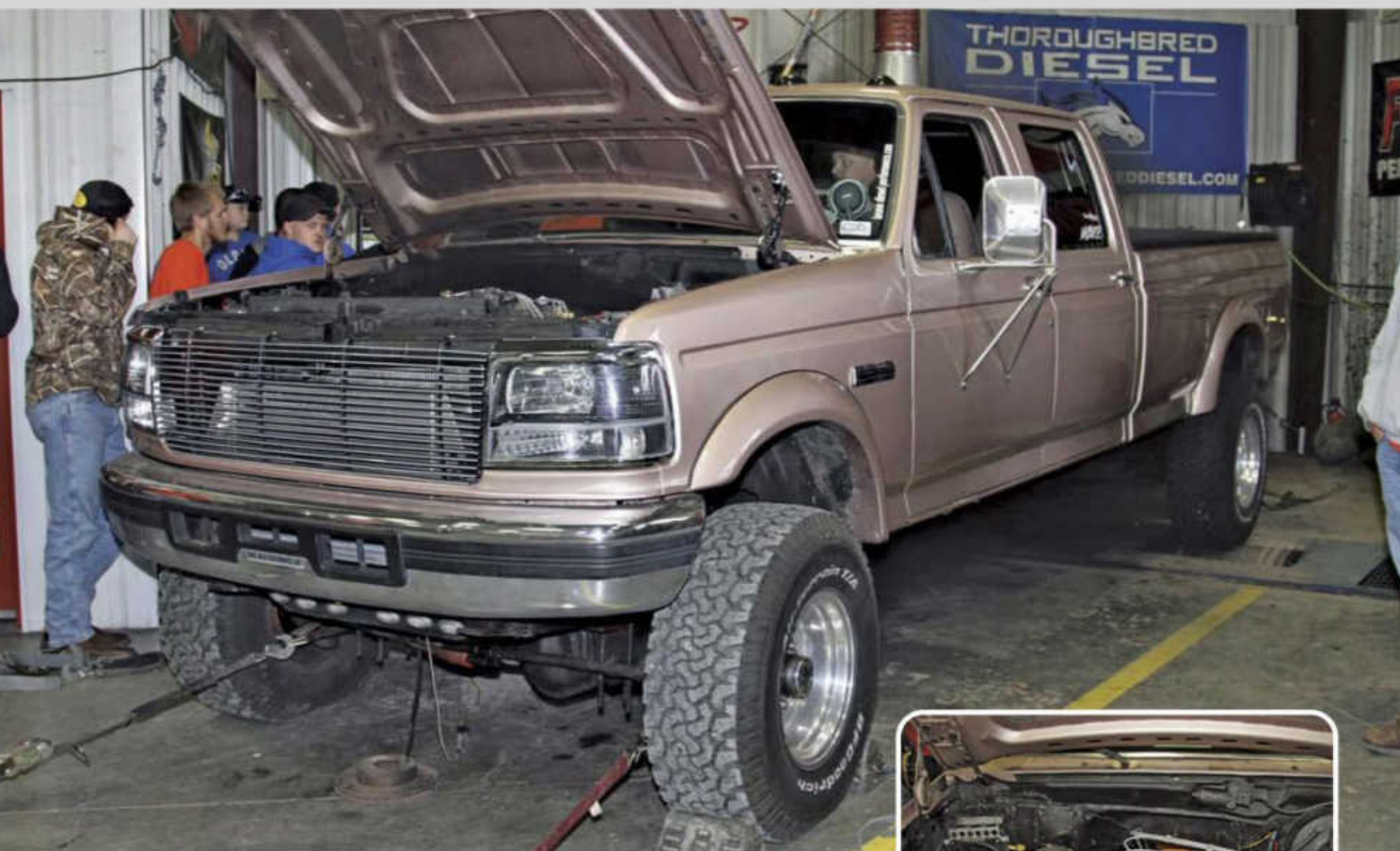
**TRANSMISSION:** Allison built by Fleece Performance Engineering

**MAX HORSEPOWER:** 638.6 HP

**MAX TORQUE:** 1,132.3 LBS-FT.

**WHY DID YOU BUILD THE TRUCK?** I built this truck for the passion and love of the sport. I got into diesels a couple years ago and finally was able to buy this truck and went all out with it when I did. I love diesel trucks and the way they feel with a lot of power behind them.





## 860-HP FUMMINS



**OWNER:** CHRIS HATZMAN **HOMETOWN:** Taylorsville, KY **TRUCK:** 1997 Ford F-350

**BUILDER/SHOP:** Owner built

**ENGINE:** 5.9L Cummins 12-valve with .020 over flycut pistons, balanced stock rotating assembly and Hamilton cylinder head

**TURBO(S):** Single; Billet S475

**FUEL UPGRADES:** AirDog 200 pump/filter system and 5X.020 injectors

**AIR UPGRADES:** Custom intercooler and Joker Fab intake manifold

**NITROUS:** Yes, single stage

**EXHAUST UPGRADES:** Steed Speed exhaust manifold and 5-inch turbo back exhaust terminating at a miter-cut 8-inch stack in the bed

**TUNING:** None

**TRANSMISSION:** Firepunk 48RE with billet shafts and DPC triple disk torque converter

**MAX HORSEPOWER:** 860.5 HP

**MAX TORQUE:** 1,572 lbs-ft.

**WHY DID YOU BUILD THE TRUCK?** It was my dad's truck and I will never sell it, so I built it as a play toy to have fun with and make him proud.





**PERFORMANCE BUILT  
TRANSMISSIONS**

**SWAMP'S**  
DIESEL PERFORMANCE

**swampsdiesel.com**



**ASSEMBLED  
PERFORMANCE  
ENGINES**

Heavy Duty FICM, 48v & 58v



HV/HF Injection Driver Module



Gen3 HPOP



RODS



PISTONS



CAMSHAFTS



Turbo Mounting Kits



Injectors



- High Performance Fuel Injectors • Custom Engine & Transmission Tuning • Camshaft & Valve Train
- Engine Dynamometer Service • Performance Engine Builds • Cylinder Head Porting • Upgrades
- Turbocharger & Transmission Upgrades • Installations • General Repair Service
- MCC, SCT, EFiLive, TS and more tuning platforms supported • Nitrous Filling Station • Machining & Fabrication

Buy online from our **500+** products in our web store: **swampsdiesel.com**

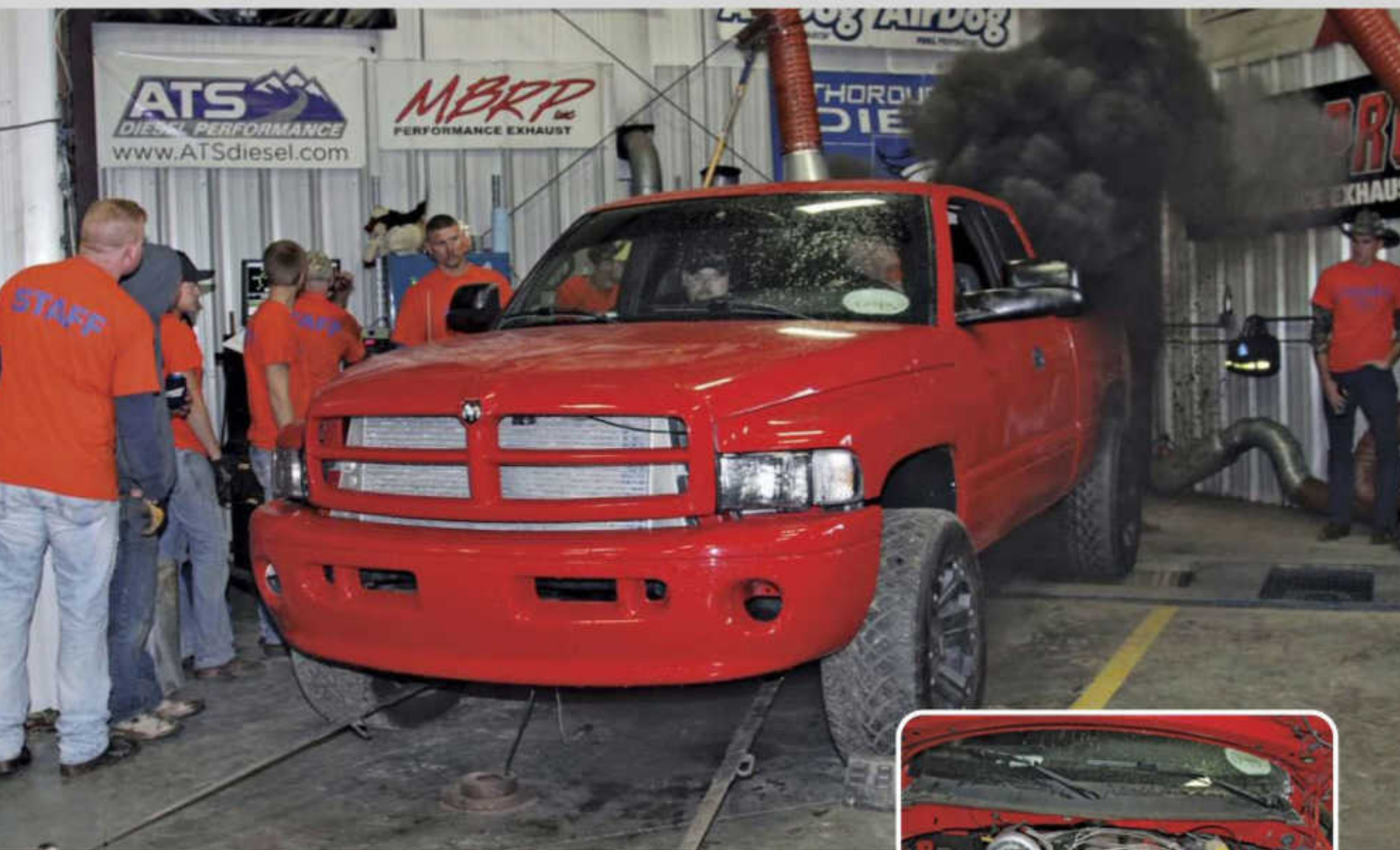
Toll Free **(866) 595-8724**

Fax **(615) 793-5572**

304 Sandhill Road, Suite A  
La Vergne, TN 37086







## 936-HP DODGE



**OWNER:** CHAZ GILES **HOMETOWN:** Columbia, KY **TRUCK:** 2002 Dodge Ram

**BUILDER/SHOP:** Bluegrass Diesel Performance

**ENGINE:** 2002 5.9L Cummins converted to 12-valve with .015 over 24-valve cut pistons, 12-valve rods, ported 12-valve cylinder head and billet camshaft

**TURBO(S):** Compound with S300 66mm and S400 84mm

**FUEL UPGRADES:** Waterman mechanical fuel pump, dual feed injection pump and 5X.020 injectors

**AIR UPGRADES:** Spearco intercooler, Tater Built individual runner intake manifold

**NITROUS:** No

**EXHAUST UPGRADES:** Stainless Diesel exhaust manifold and 4-inch turbo back exhaust system with 7-inch stack in bed

**TUNING:** None

**TRANSMISSION:** Custom built 47RE with Diesel Performance Converters triple disk torque converter, billet input and output shafts and Goerend full manual valve body

**MAX HORSEPOWER:** 936.8 HP

**MAX TORQUE:** 1,590.3 lbs-ft.

**WHY DID YOU BUILD THE TRUCK?** I started building the truck as just a fun street truck and then the build took a more extreme course trying to make big power. However, we are going into the engine again, and the new build will be based to run on the street with some occasional drag racing. I would ultimately like to prove its power on the drag strip.



**MOVE**  
BUMPER COMPANY

**WELD-IT-  
YOURSELF  
BUMPER KITS**



**DIY BUMPER KIT**

**\$395**



**KIT PIECES**



➤ All Parts are preformed and shipped UPS to your door

➤ Basic tools needed; Welder, 4" grinder with buffing and cutting wheel



406-366-2341 / 877-462-4816  
[www.movebumpers.com](http://www.movebumpers.com)



**MOVE**  
BUMPER COMPANY



# FROM PIECES TO PERFECTION



Matt Hughes' 1966 C10 was converted to 4WD and rides on a shortened 2500 HD chassis with a 550-horsepower 6.6L Duramax stuffed under the hood.





# NINE-TIME UFC CHAMPION MATT HUGHES' CUSTOM C10

Text: Kyle Tobin Photography: Chris Tobin

**W**hen retired nine-time UFC Welterweight champion Matt Hughes wanted a custom old school truck with a diesel power plant, he turned to David Timm and his friends at 2 Brothers Custom Trucks (The shop has since changed its name to Timm Built Customs) in Springfield, Illinois, for the job. Hughes, an Illinois native, and the team at 2BCT had a simple but tricky goal in mind for the project. The truck was to look like a restored Chevy truck to the naked eye, but closer inspection would reveal a modern chassis and Duramax/Allison drivetrain that would propel the classic truck. Timm and his crew met the goal with flying colors, finishing the truck in about ten weeks before presenting the finished truck to the UFC champion.





The rear axle uses Pro-Comp MX-6 remote reservoir shocks paired with Atlas Springs to tackle any challenge as the truck exhales through an RBP stainless steel exhaust system.

Mounted as a multifunctional tool/storage box, the black diamond plate UWS box contains both the repositioned batteries and part of the fuel filler hose leading under the bed to the modern fuel tank to maintain the C10's original b-pillar fuel filler cap.



The lined bed of the truck was capped off with the Chevy bowtie burnt into the wood panels between the tubbed wheel wells.



With diamond plate fitted to the color-matched bumper, the modified Dodge bumper blends seamlessly into the classic Chevy bed.







Losing over 27-inches of length from the frame, as well as a conversion from IFS to a solid axle, the '06 chassis underwent major surgery to align with the '66 body. Dual Pro-Comp coil over piggy-back reservoir shocks and Off-Road Direct control arms support the solid axle front end.

## GUTS AND GLORY

Starting with a wrecked 2006 crew-cab short-bed 4WD Chevy 2500HD and a 1966 2WD Chevy C10, melding the two together meant a lot of cutting and fabricating for the chassis work. Gutting and tearing down the '06 until it was nothing but a bare frame and the LBZ Duramax drivetrain was the first of many time-consuming steps. The next, and equally challenging step, was dismantling the '66, removing the cab and bed from the frame to make room for the modern chassis. Several test fits were mocked up before cutting would begin to shorten and reinforce the longer 2500 frame to suit the C10 cab and bed.

Before the frame could be shortened though, the crew needed to find and determine the cab's final position. After slicing and shaving the inner fenders and eventually fabricating new custom front inner fender wells, plus extra cutting to lower the cab further onto the frame to hide the frame under the classic body, it was positioned. With the cab in place over the engine, mounted on the newly fabricated body mounts, the crew had to cut out and fabricate a new core support to make

room for the large radiator, intercooler, and A/C condenser. To house the larger Allison transmission, a new removable transmission tunnel cover was fabricated. Once the engine and all the vitals were fitted and mounted into the tight engine bay, sheet metal was crafted to cover the slight gaps toward the front of the bay, cleaning up the conversion neatly.

With the cab in position, they determined that a 27 3/4-inch chop would be required to properly locate the rear axle under the C10 bed. Once the Z notch was cut, the frame was welded back together and reinforced with 3/16-inch plate steel on the inside. Next, the bed would have to be modified, fabricating new mounts, raising the bed floor roughly 5-inches to match the lowered cab. The team also tubbed the wheel wells to allow the huge Toyo tires they planned to run to fit beneath the bed without rubbing. Like many classic trucks, Timm and his team installed a wood floor kit in the bed, but treated it to a custom touch by burning a Chevy Bowtie into the finish with a torch before staining and finishing the wood.

A black diamond plate UWS toolbox was

installed in the forward portion of the bed, not just for the traditional utility and secure storage, but also to house a pair of Optima Yellow-Top batteries since there was not room for them under the hood. The box also contained another unique modification: Hughes and Timm wanted to retain use of the factory fuel filler position in the drivers side b-pillar and use it with the modern frame mounted fuel tank rather than the '66 gas tank behind the seat. To make it work, the crew modified a fuel filler hose to run behind the seat, through the toolbox, and into the 2500's fuel tank. Disliking the look of the factory rear bumper, it was decided to take a new model Dodge bumper, split it to widen it an inch, and modify some metal work on the bed to install it on the truck for a smooth look in the rear, flushed to the bed sides.

The fabrication became much more tedious as work began to integrate the '06 steering column, pedals, seats and all the various interior components required to make a comfortable and modern-classic truck. Fitting custom metal work to house the set of six Auto Meter gauges and the other 2500 mechanisms such



The pattern of mixing old school and new continues into the interior with the mix of digital and analog Auto Meter gauges custom fitted into the dash as well as a classic looking Billet Specialties wheel mounted on the modern steering column.



Mirroring a section of the chrome trim down the truck's side is a custom made piece to embellish the bare lower side of the interior door panel. Notice the functional original fuel filler in the stock location on the b-pillar. See the molded kick panel pod that houses MTX speakers?



The front seats from the donor Chevy were re-upholstered in black leather and charcoal suede with a kit from Roadwire to make the classic truck a comfy place to ride.



With a proven suspension combo ready for a pounding, this beefy truck required some tough wheels and tires, a requirement satisfied by the 18-inch RBP wheels and 35-inch Toyo Open Country M/T tires.



The beautiful two-tone paint job shows the attention to detail carried out in crafting this truck, thanks to the teams at Bill Mathews Auto Body and Attitude Air-brush. Using subtle black accents throughout the paintjob highlights the trim and the flawless bodywork.

as the 4WD activation switches in the C10 dash took time and careful attention to detail. The crew used PVC pipe to make a pod coated in fiberglass resin and painted to match the rest of the dash to fit the three remaining Auto Meter gauges molded into the top of the dash above the gauge cluster. Balancing the old and new is a classic looking Billet Specialties Banjo style steering wheel with a wood grain perimeter mounted on the modern column. Inspired by the '66 exterior chrome trim

running down the side of the truck comes a vinyl covered piece of MDF with a brushed aluminum inlay to add detail to the lower section of the door panel. Knowing that every custom rig needs to be able to blast your favorite tunes, custom kick panels pods were built to house a 5 1/4-inch MTX speaker on each side. To supply the bass and power, a sleek enclosure was built behind the seat to become home to a pair 10-inch subs and a Boston Acoustics four-channel amp all linked to the

Kenwood Excelon KDC-X591 head unit.

## BODY WORK

To begin preparing the once pale green C10 for body work and paint, the cab and bed were sent for soda blasting at Bill Mathews Auto Body in Springfield, Illinois. While the body was away being worked to perfection for primer and paint, the chassis received its undercoating and suspension. To shore up the front, the IFS suspension was removed from





Giving the sound system enough power and adding some thump is a Boston Acoustics four channel amp and a pair of 10-inch subwoofers installed in a custom enclosure behind the seats.



Installing the LBZ Duramax engine, the stock radiator, intercooler and A/C condenser into the older body took a lot of work, but the final result is a clean install looking like it rolled off the assembly line in 1966 with a Duramax under the hood.



ATS' Aurora 5000 turbo charger combines with the custom EFILive tuning from Fleece Performance and the free flowing RBP exhaust to deliver well over 500 horsepower.

the 2500 chassis to make room for a Dana 60 axle with an Off-Road Direct straight axle swap kit. Dual Pro-Comp coil over piggy-back reservoir shocks and Off-Road Direct control arms stabilize and lend travel to the front while two Pro-Comp MX-6 remote reservoir shocks work with a set of Atlas Spring leaf springs in the back. With hardy 18-inch RBP wheels and grippy Toyo M/T Open Country 35X12.50R18LT tires, this rig is up for any terrain, any time. Adding to the rugged appeal and aiding access to the lifted truck are a set of Carr side steps.

Once back in the shop from Bill Mathews and Attitude Airbrush with its brilliant Jaguar gray and black two-tone paintjob, the crew had a short time before they were set to reveal the truck to Hughes. Installing the Roadwire black leather seat covers with gray suede inserts went smoothly as the reassembly began bringing to life the vision of the custom C10.

## POWER PLAY

With the beautiful truck completed and presented to Hughes, the time came to turn some attention to the Duramax engine. The 6.6L LBZ Duramax diesel had plenty of power and torque for the lighter C10, but there's always room for improvement, and the crew at Scheid Diesel knew how to get it there. Courtesy of Bosch Motorsports, custom 150-hp injectors were fitted into the engine to get the fuel flowing. Improving airflow in and out of the engine, they installed an ATS intake and a 4-inch diameter stainless steel RBP exhaust system with an ATS Aurora 5000 turbocharger installed to build the boost. Fleece Performance Engineering set Hughes up with an EFILive custom tune, bringing the truck up to a stout but still manageable 550 horsepower and 1,200 pound feet of torque. All that power is handed off to an ATS built Allison transmis-

sion with their 5Star multi-disk torque converter and an ATS Co-Pilot transmission management computer to control shift points and transmission performance.

## PERFECTION

With a specific goal in mind, former UFC champion Matt Hughes knew all the right people to bring his dream to reality. With David Timm and his crew building the truck then handing it off to the diesel experts at Scheid Diesel and Fleece Performance Engineering, the C10 went from pieces to perfection. Styled with the looks of a custom classic truck and the power, strength, and reliability of a modern 3/4-ton diesel, this '66 Chevy certainly stands out as unique among the pack. When Hughes' son Joey turned sixteen in 2015, Hughes passed down the '66 Chevy to him. Using the well-crafted machine as a daily driver, Joey cruises with the safety and reliability of a stout modern diesel and the stunning looks of a classic show truck. **UDBG**



A striking truck built from the pieces of trucks from two different centuries came together to become Matt Hughes dream machine. It is now passed down to his son Joey, allowing the next generation of Hughes' to enjoy the wonderful machine.

# DP-TUNER'S INFINITY SYSTEMS

Touchscreen Tuning for the  
7.3L and 6.0L Power Stroke





## TEXT AND PHOTOS BY J.S. HANSEN

**W**hile the 7.3L and 6.0L Power Stroke diesels are no longer in production, there were millions of them sold throughout the years. Today, most of them are daily drivers, tow rigs and work trucks. And with the advent of emissions-controlled diesels, the value of these older trucks is going up with time, not down.

While the 6.0L enjoys a wide variety of tuner selections, most 7.3L Power Stroke owners had to resort to "switch chip" tuners where the owner could toggle between one tune and another. One of the more

popular options came from a company called DP-Tuner of Hoschton, Georgia. Most applications plugged the brain into the back of the test port on the ECM to deliver performance, towing and economy tunes via a turn of the dial. This setup lacked the real-world system monitoring of more modern LCD tuners or the ability to read trouble codes. It hasn't been until recently that 7.3L Power Stroke owners could enjoy the convenience of a modern touchscreen for the older Fords.

DP-Tuner has developed an all-in-one system to allow Power Stroke owners access to their vehicle's electronic system like nothing else on the market, according to DP. The Infinity DX and Infinity PL from DP-Tuner are new color touchscreen monitoring devices that allow the end user total access to their vehicle's computer system for viewing multiple parameters of real-time information from the truck's ECM (engine control module). The Infinity system also has the ability to do diagnostics, high-speed vehicle data logging and complete custom tuning all at your fingertips. The options are nearly endless and each unit can be built and shipped specific to each customer's needs and requests. Plus, system expandability is also an option as a customer's needs or market technology changes and improves according to the folks at DP.

**DATA MONITORING**

The Infinity DX is offered in a couple different configurations depending on your needs and price point. If purchased as a generic in-cab monitor, the 4.3-inch Infinity monitor will plug directly into the vehicle's OBD-II port and will allow the end user access to multiple vehicle PIDs (real-time data streams) for viewing. An optional EGT Kit can also be purchased for monitoring exhaust gas temperatures. As a monitor alone, the Infinity will do basic code reading and clearing, and can be used to view basic engine vitals like coolant temperatures, transmission fluid temperatures and engine rpms. Once you've chosen which parameters you'd like to have on your main screen, you can then set minimum and maximum values for each PID, along with setting audible warnings should a preset threshold be met. The system also has day and night screen functions that will automatically dim as needed for the best viewing display.

**SCAN TOOL**

For the Ford Power Stroke application, DP-Tuner also offers an optional VIN license that further enhances the Infinity's abilities. With the vehicle license, end users will be given access to complete scan tool capability and hundreds of Ford specific PIDs. With the enhanced Ford package, your diagnostics capability expands to include just about everything your Ford dealer or local repair shop's expensive scanner will do. This includes being able to do key-on engine running and key-on engine-off tests, glow plug system checks, injector buzz tests and cylinder contribution tests. The Infinity also has the ability to do live high-speed data logging that can be used to further diagnose any problems or even be emailed back to DP-Tuner for them to look over. Data logs can be saved to the Infinity's SD card and downloaded directly into your computer where





**01** The new DP-Tuner Infinity is an all-in-one system that can handle monitoring, tuning, diagnostics and data logging needs for both the 7.3L and 6.0L Power Stroke applications. The color touchscreen unit is easy to install and gives the end user all the data they could ever need access to.



**02** Installation of the Infinity system couldn't be easier with just a simple plug and play cord at the OBD-II diagnostic port under the dash. Through the OBD-II port, the Infinity DX will allow you to monitor virtually everything inside your PCM, hundreds of Ford specific parameters like fluid temperatures, turbo boost, fuel and oil pressures, etc. There's also an optional EGT kit that will allow you to monitor your exhaust gas temperatures.



**03** While the Infinity can be purchased to be only a monitor and diagnostics scanner, customers can also purchase the required FEPS cable that's used to download custom tuning from the Infinity into their vehicle's PCM. DP-Tuner's tuning software allows them total control and access over both the Power Stroke engine and the automatic transmission, so power, mileage, drivability and transmission shift strategies can all be improved upon.



**04** Mounting the Infinity is quite simple as well. Using the included windshield suction cup mount, the Infinity can be mounted without making any modifications to your factory dash or A-pillar. DP-Tuner does offer a few different mounting options, if you'd prefer a more permanent mount.



**05** After connecting the OBD-II cable to the back of the monitor and slipping it down into the dual T-slot mount on the windshield, you can then turn your ignition on and power up the screen. The Infinity monitor will turn on with your ignition. Once powered up, the initial DP-Tuner splash screen will appear while the system boots up and connects with your vehicle's data system.





**06** With the system now up and running, you'll have multiple different layouts for gauge display to choose from. These layouts are fully customizable to the end user's preference and include analog gauges or digital readout display, along with color options, and number of PIDs per screen. In this screen, you can see we have EGTs shown in the center analog display with six other PIDs being shown off to the sides as digital readouts. By pressing on each PID, you can change what's shown there, set minimum and maximum value warnings, and minimum and maximum readings.



**07** Another option for displaying your vehicle information is in digital readout only. This screen shows you a total of nine PIDs at a time, all of which are fully adjustable and customizable. Using the digital-only style display, you have the option of showing up to 24 PIDs on one screen.



**08** Setting the gauge properties allows you total control of the limits of each PID, along with changing their color display and setting warnings should your preferred threshold be met. This can be quite beneficial for setting max EGT or fluid temperature light. Once setting these max values, the Infinity can actually alert you with an audible noise should you not be paying attention while towing up a long grade and EGTs start to get too warm.



**09** When purchasing the Infinity, you'll be given the option of purchasing a VIN license which will be required should you want to use the system as a full scan tool or tuner. With this VIN license come quite a few very unique abilities. You'll gain access to more than 300 vehicle parameters that can be viewed on the monitor, along with full data logging access and complete system diagnostics. By diagnostics, we don't just mean the ability to read and clear trouble codes. DP-Tuner has developed a full software package that will allow you, the end user, to do key-on engine running, key-on engine-off, glow plug circuit, injector buzz, cylinder contribution, etc. It's like having a Ford Dealer Technician and Scanner with you at all times.



**10** In the main menu of the Infinity, you'll have access to all the different options found within: gauges, performance tests like 0-60 mph and 1/4-mile time testing, live data logging, system setup, tuning, and even media music files you can save to the system's SD card.

they could be converted into spreadsheet form to help make better sense of the vehicle's running issues, emailing these files back and forth with DP-Tuner can also help with any performance tuning needs as well.

### TUNING OPTIONS

The performance tuning section is where the Infinity comes to life as the folks at DP-Tuner are among the more famous 7.3L and 6.0L custom tuning specialists in the Ford market. With more than 10 years of Power Stroke tuning experience, owner Jody Tipton has learned a thing or two about what goes on inside your truck's powertrain control module and what improvements can be made.

For the 7.3L application, the Infinity can be purchased and used as a stand-alone flash tuner that will reprogram your factory computer with a performance tune of your choice built specifically for your needs and the truck's modifications. DP-Tuner offers 12 tunes for automatic transmission trucks and 10 tunes for those running a manual transmission. These tunes include different power levels for towing depending on trailer weight. Four fuel economy tunes are available depending on driving conditions and elevation, and of course, there are a few more aggressive higher-horsepower tunes for maximum performance potential.

For the 6.0L platform, DP-Tuner offers nine different tunes that should cover your high-performance, fuel economy and towing

needs. The Infinity's 4GB SD card can hold an unlimited amount of tunes, which can all be emailed back and forth with DP-Tuner if further fine tuning needs to be done or changes are made to the vehicle that require tuning adjustments.

In addition to being a flash tuner, for the 7.3L market looking for adjust-on-the-fly tuning, the Infinity can also be used as the switch to control the DP-Tuner F5 or F6

multi-position custom chips. Development of a cable to allow switching of TS brand multi-chips is also in the works.

While the 7.3L and 6.0L trucks have been out of production for quite some time, it's also given the aftermarket a chance to learn them inside out. The end results are products like the Infinity system that help move the trucks forward in technology and performance. **UDBG**



**11** With the option to use the Infinity as a tuner, DP-Tuner can write multiple custom tunes for you to choose from that can be saved on the device's SD card for you to choose from and download into the vehicle's PCM at any time. This is where the previously mentioned VIN license comes into play. Using this license, the Infinity can save your vehicle's stock file and then program the truck with one of the custom DP-Tuner files, whether it's for towing, fuel economy or performance. While the VIN license would lock these tunes to that specific vehicle, multiple VIN licenses can be purchased allowing you to use the Infinity to tune as many vehicles as you'd like. This expandability makes it a great option for fleets or customers with more than one Power Stroke vehicle.



**12** Within the tuning section of the Infinity you can choose whether you want to load custom tune files or return the vehicle to stock. You can also access your vehicle info to see what tune is currently downloaded. For the 6.0L Power Stroke, tuning is via the OBD port as a full flash tuner, which requires reprogramming the factory computer. In the 7.3L Power Stroke, the Infinity is used the same way, as a flash tuner. However, with an optional interface cable from DP-Tuner, it can also be used as a switch to control their multi-position F5 and F6 chips, allowing full switch-on-the-fly tune adjustability. DP-Tuner is also working on expandability to allow the Infinity to be used to switch tunes on TS brand multi-chips.





**13** Since DP-Tuner's tuning software allows them total access to both the engine and transmission, and the Infinity uses an SD card that can hold multiple tune files, the customer's choice of tuning options is nearly endless. Best of all, with their vast knowledge of the 7.3L and 6.0L platforms, each tune will be built specifically for each application. Your tuning files will be developed specifically for your vehicle, things like aftermarket bolt-on parts, tire size, gear ratio, transmission modifications, performance turbocharger systems, aftermarket injectors, high-pressure oil pumps, EGR systems, etc. will all be taken into consideration when your tunes are built to be sure the vehicle performs at its maximum potential.



**14** For those of you who like analog gauges, the three-gauge display is very easy to read and offers full customization, including the background pictures, which can be changed to any graphic you'd prefer through the use of the Infinity's SD card and your computer.

**SOURCE:** DP-Tuner DP-Tuner.com 828-221-0076

# RECON

UNIQUE AUTOMOTIVE LIGHTING COMPONENTS

Get Lit!

ORDER ONLINE! GET 10% OFF USE PROMO CODE: DW13

GoRECON.com



Learn more about RECON products. Scan barcode with your mobile device and visit our site.

## FORD F-SERIES TRUCKS ILLUMINATED EMBLEMS

Illuminated Emblems  
2-Piece Kit Includes  
Driver & Passenger  
Side Fender Emblems  
in Black or Chrome  
finish with Amber,  
Red or White  
Illumination.



Ford Motor Company  
Trademarks and Trade Dress  
used under license to RECON

## PROJECTOR HEADLIGHTS

### Extreme CCFL Efficiency

RECON'S NEW Ford  
SUPERDUTY 2011-2013

Projector Headlights with  
CCFL Halos & Daytime  
Running Lights!



Part #  
2644114DW  
Daytime  
Running Lights

## LED INTERIOR DOME LIGHTS

### Wanna light up your interior?

RECON Has the answer! Check out these hot new LED dome lights for domestic cars and trucks. These LED dome lights give off a killer-looking whiteish-blueish colored light that will set the interior of your rig off!! When they ask where you got em', tell em RECON Truck Accessories!

These kits come complete as direct replacements for the factory installed dome lights. They can be installed in mere minutes with no tools required for installation.

Several models available visit our website for details.



## LED TAILGATE LIGHT BARS

RECON's New Xtreme Tailgate Light Bar features Amber "Scanning" LED Turn Signals, Red LED Brake/Running Lights, and White LED Reverse Lights. (Fits all trucks and most SUVs.)

**XTREME**

**WhiteLightning**

Red LED Brake/Running Lights, and  
White LED Reverse Lights

**LINE OF FIRE**

Red LED Brake/Running Lights

49" 60"



facebook.com/GoRECON

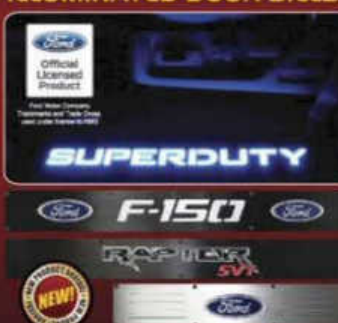


twitter.com/RECONTruck

ORDER ONLINE! GET 10% OFF USE PROMO CODE: DW13

GoRECON.com

## ILLUMINATED DOOR SILLS



New Billet Aluminum Door Sill feature illumination which comes ON when the front and rear doors are opened. When the doors are closed, they return to the OFF position until the dome light switch is turned ON.

- Available in Brushed
- Aluminum and Black
- Anodized Billet

- SUPERDUTY
- F-150
- RAM

## BIG RIG ICE RUNNING LIGHTS

Amber LED Running Light with White  
LED Courtesy Lights.

48" 62"

**BIG RIG ICE**



## DRL & LED DRIVING LIGHTS

Ultra High Power LED Technology.  
RECON has many different styles that  
fit your truck and SUV. Visit  
[www.GoRECON.com](http://www.GoRECON.com)



OR ORDER BY PHONE 877-377-3266





## LED TAIL LIGHTS

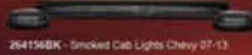
JEEP WRANGLER  
2007-2013

RECON's L.E.D. Tail Lights provide Maximum Visibility and use L.E.D. Technology. They require simple plug & play installation and are also DOT/SAE Approved.

Available in Clear, Smoked, Red & Red Smoked  
Available for Ford, Dodge, Chevy/GMC & Toyota

*Get Lit!*

## LED CAB ROOF LIGHTS



Along with Smoked, RECON cab lights are also available in the following lens colors:



**NEW LED Strobe Cab Lights**  
with adjustable flash patterns are  
Now Available!



264188 - 15W Type High Power  
L.E.D. Bulbs in Amber & White  
These special LED bulbs feature the latest  
440 ultra-bright LEDs in all factory standard models 2013  
model Superduty & 2014 model Superduty.

## SIDE MIRROR LENSES

LED Running Lights / Turn Signal  
lenses for 2009 to 2013 Ford F150 &  
Ford RAPTOR pickup trucks.

264241BK - Ford 09-13 F150 & RAPTOR  
Amber LEDs - Smoked  
264241CL - Ford 09-13 F150 & RAPTOR  
Amber LEDs - Clear



264140BK - SMOKED 08-13 Ford  
SUPERDUTY Side Mirror Lenses



## LED FENDER LENSES



**NOW AVAILABLE**  
2011-2013 Ford SUPERDUTY 26413BK  
2010-2013 Dodge RAM 26413BK

Other models available visit our website  
www.GoRECON.com

## LED REPLACEMENT BULBS

BULLET STYLE 6-WATT ULTRA  
HIGH POWER LED BULBS

921 912 906 T-15 (1 Ultra High Power  
6-Watt Magnified LED on each bulb)  
Bullet-Style Ultra High Power 6-Watt  
S.M.D. Bulbs - WHITE



## T5 STYLE LED BULBS

921 912 906 T-15 (1 Ultra High Power  
3-Watt Magnified LED on each bulb)  
Bullet-Style Ultra High Power 3-Watt  
S.M.D. Bulbs

10MM X 42MM 6 S-B  
LED HIGH-POWER BULBS

576 / 364 10mm x 42mm Festoon Style  
Resist & Diode CANBUS Ultra High  
Power 3-Watt S.M.D. LED Bulb w/ 8  
S.M.D. LED's on each bulb - WHITE



Visit [www.GoRECON.com](http://www.GoRECON.com)  
for bulb applications.

These new RECON dual color  
switchback LED bulbs have 30  
Amber & 30 White radial facing  
(360 degree) LEDs that illuminate  
perfectly in the chrome or  
black chrome reflective housing  
of your vehicles head lamp  
or tail lamp assembly.



## 2nd Generation

Error-Free Resist & Diode  
Unidirectional & 360° 3-Watt  
S.M.D. LED Bulbs



RECON's Newest LED Bulbs  
Feature extremely low power  
consumption, generate practically  
no heat, and boast a longer life  
expectancy than any other  
automotive LED bulb currently  
available. RECON LED bulbs  
have an average life expectancy  
of up to 80,000 hours.

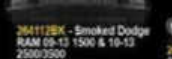
HID & XENON  
HEADLIGHT BULBS

RECON XENON  
HEADLIGHT bulbs  
produce MORE light  
while consuming less  
power and GENERATE  
LESS HEAT THAN  
FACTORY HALOGEN  
HEADLIGHT BULBS.



New for 2011-2013  
RECON's High  
Intensity Discharge  
aka HID headlights  
**ARE NOW  
AVAILABLE!**  
For Off-Road Use Only!

## LED 3RD BRAKE LIGHTS



RECON clear and smoked L.E.D. 3rd brake lights are simple to  
install and are a direct replacement for your OEM factory installed  
brake lamp. Available in Clear & Smoked.



*Get Lit!*

## CARGO AREA ILLUMINATION KIT

This kit is completely weather-proof & mounts out of site  
underneath both bed rails & illuminates the truck bed  
from inside the cargo area. Also works great in boats &  
inside enclosed trailers as auxiliary pathway lighting.



## LED STROBE LIGHTS

RECON's new cutting-edge ultra  
high-intensity LED strobe light kit is the  
brightest & best LED strobe light kit  
available in the automotive aftermarket.



Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

Available in: 26421 Series 26422 Series

ORDER ONLINE! GET 10% OFF USE PROMO CODE: DW13

**GoRECON.com**



# GREAT



Erik Miller's 1989 K30 4X4 is an amalgam of the Big Three domestic manufacturers that he built and customized from the ground up inside his barn.

**E**ric Miller is a farmer and the owner of Miller Valley Equipment Inc. in Cascade, Indiana, who had a very specific goal in mind for his build. He wanted a rugged, dependable, easy-to-work-on, no-ECU truck both to work out of as daily grinder, and to be a fun weekend warrior.

Blending his favorite parts indiscriminately from American-made manufacturers to fit his taste, Miller would take years of hard work and determination to create the machine of his dreams, leaving no stone unturned as he customized almost every piece of the truck. Miller also set out to build the rig himself, in

his barn with help from his friends, Mike Corbin and Matt McLees.

## WORKING ON A DREAM

Miller's chase of the dream started with the engine, which was a 2001 5.9-liter Cummins. In his line of work, Miller buys a fair



# WHITE



## NO STONE WAS LEFT UNTURNED ON THIS MASSIVE BUILD

TEXT: KYLE TOBIN

PHOTOGRAPHY: CHRIS TOBIN AND ERIC MILLER

share of salvaged tractors and other agricultural equipment. When a Case IH sprayer came in that had been hit by a train crossing the railroad tracks, he knew he'd found the heart of his future truck. Knowing the tractor's engine would need some upgrades to supply the power he was after, he dove deep into

the engine tearing it down for a complete performance rebuild. While Miller did a lot of the work on the engine himself, he trusted the crew at Y-Diesel Performance in Spraingville, Indiana, to handle the critical internal assembly.

He chose to retain the factory rods and

crankshaft, but they now swing a set of low compression 0.040-over Cummins marine pistons. To keep the rotating assembly firmly in place Miller and the Y-Diesel Performance team opted to secure the crankshaft with a girdle, and used ARP main studs and rod bolts to lock everything down. A stock cam

actuates the valves that are secured in the head with a set of 60-pound springs and titanium clips and retainers while ARP head studs keep the head firmly in place on the block.

To get plenty of fuel into the engine, Miller went with a FASS 220 fuel pump and filter system with a custom dual feed setup to work with the saddle tanks in the truck. The lift pump feeds a built 12mm P-7100 injection pump driven by an adjustable timing gear. High-pressure fuel is delivered to a set of Cummins marine SAC nozzle 7X14 injectors through 0.093 stainless lines. Keeping with his computer free design, but still wanting the on-the-fly adjustability that electronic tuning can provide, Miller fabricated a mechanical solution. He can manually turn up or down the injection pump fuel delivery on the fly from inside the cab with a small crank lever in the dash, taking the machine from a smoke-free, 20-plus MPG sleeper all the way to a roaring blackout with a few cranks of the control lever.

Getting to the airflow, Miller went with a compound turbo set up to get the Cummins plenty of boost to make big power yet maintain drivability. Using a Borg Warner S474 over an Industrial Injection Phatshaft 62, the compound set up peaks at around 75 lbs. of boost. To expel the burned gasses, Miller used a PDI manifold and fabricated heat wrapped 4-inch exhaust tubing that terminates at a set of Silverline 5-inch straight cut stacks. Tied in to keep air flowing and temperatures down was a Pusher intake manifold and a 2nd generation Dodge intercooler. Unsatisfied with the looks of the former tractor motor, Miller hand polished the valve covers and then had them chrome dipped. The brightwork is offset by bright red paint slathered on the long block and accessories to really make the engine pop in the bright white engine bay.

This package combines to deliver an estimated 750 to 800 horsepower of reliable power able to haul heavy loads, daily drive, and speed around on its days off. To get that power

moving, Y-Diesel Performance helped Miller put together a Dodge NV4500 transmission with a 1-3/8-inch billet input shaft with a South Bend dual disc clutch and a custom bent Dodge shifter for the transmission. To further bolster the drivetrain, Miller opted for a 4-inch custom driveshaft. Again, sticking to reliability and durability as his guide, Miller



Miller started with the engine for his future dream truck and made sure it was the best it could be before setting it into the K30.



This truck stands out with one of the cleanest builds out there and one of the prettiest engine bays around.



These compound turbos spool up 75 pounds of boost and help rev this engine up to around 750 to 800 horsepower.

used a rebuilt 1st gen Dodge NP205 transfer case that he bored out for extreme duty bearings.

With a built engine he predominantly customized in his barn, he turned his attention to the chassis. Miller found a clean 1989 Chevy K30 dually that had once been a SWAT vehicle that he was able to sell the flatbed and engine out of for the same price he paid to buy the truck. He also purchased a parts truck to augment the existing K30, and sold its engine for nearly the price he paid for the truck, giving him a chassis, cab, bed and a lot of extra parts for a very small investment.

Miller not only converted the 2WD dually into a 4X4 single wheel truck, but he also chopped 14-inches out of the frame, reinforcing it to be stronger than it originally was. Custom motor mounts and cross member were fabricated into the frame as well. But that wasn't the end of the list of modifications for the undercarriage: he also grafted in an '84 GM 14 bolt disc brake conversion in the rear paired with a spool and 4:10 gears. For the front end, Miller opted for a GM King Pin Dana 60 with an open diff. Once he had the frame dialed into the 150-inch wheelbase he desired, Miller sandblasted, smoothed, filled, primed then coated the chassis gloss black.

Getting the rear riding high and sailing smooth, Miller used 6-inch lift aftermarket leaf springs with Sulastic shackles, 2-inch blocks, and Fox Racing Shox. The front suspension was built similarly, this time with dual Fox Racing Shox, and a 6-inch lift with Sulastic shackles and an Addco sway bar kit all the way around. To further fine-tune the ride of the K30 for heavy towing, Miller fabricated custom chromoly ladder bars front and rear that lift the rear and lower the front under load and a tow assist air bag kit. Adding further utility and strength is an I-beam reinforced front frame and receiver mounts for an off-road light bar, winch, tow hooks, and weight bracket capable of handling 4,000 lbs. before bottoming out the



suspension. His towing needs range from a large gooseneck trailer to a weighted sled, so Miller outfitted his massive machine with a custom adjustable/removable pulling hitch and a B&W gooseneck receiver.

To get this behemoth twisting and turning through rough country, Miller bolstered the steering with a PSC high output pump, frame brace, cross over steering, HD connecting link, tie rod ends and a hydraulic cylinder and reservoir with custom power steering lines. With his aggressive utility truck still firmly in mind, Miller went with Mickey Thompson Classic Lock 16X12-inch wheels and Mickey Thompson Baja MTZ LT375/65R16 tires, providing a rugged look with outstanding grip across a mix of surfaces.

With the drivetrain and chassis dialed in, Miller was ready to shift gears into crafting the body into his perfect truck with help from his friend, Mike Corbin. Miller gutted and reinforced the core support to make room for the intercooler and a pair of electric fans. He also grafted on 2012 Chevy tow mirrors in place of the vent windows for style and utility. Adding further character and utility to the K30, Miller installed a pair of hardy Go Rhino tubular steps painted to match.

Corbin provided the slick bodywork that makes the truck stand out and fit Millers goal by shaving and filling holes in the tailgate, inner fenders, firewall, fender marker lights and antenna before paint. He also shortened the bushwhacker flares by 2 inches. To further refine the look of the beast, Miller installed an LMC truck C/K bumper with fog lights up front and a universal HD bumper in the rear. He then went with an '84 bed and taillights for the rear and fitted the front with a '91 Suburban front grille and lights. Miller was searching to get the whitest white he could possibly find, which turned out to be DuPont's beaming water-based custom mixed pearl white which Corbin applied.

## GREAT WHITE TRUCK

The great white truck is an eye-catching colossus ready to tackle anything with personal touches of style in every corner, but now Miller needed to put together an interior exactly the way he imagined. First off, he fabricated and installed a 2-1/2-inch roll cage just in case the big truck ever ends up



Underneath the 14-inch shortened and reinforced frame the bright white traction bars keep the axles in check while a FASS fuel system keeps the engine running full tilt.



Fox Racing Shox, Sulastic shackles and Addco sway bars bring some height and stability to the sturdy ride plus help the truck cope with the occasional sled hooked to the adjustable and removable pulling hitch.



With twin stacks jutting out of the bed in front of the diamond plate toolbox, with a gooseneck hitch in the bed, it's easy to see that both the truck and its owner are ready to work.



Gutting and reinforcing the core support allowed Miller to squeeze in a pair of electric cooling fans and the 2nd Gen Dodge intercooler behind the painted grille from a '91 Suburban that gives the big truck a clean and custom look.



In the brightest white Miller could have mixed, this colossus of a truck gleams in the sunlight with its polished smooth bodywork.



The classic and rugged Mickey Thompson wheel and tire combo lend well to the aggressive utilitarian nature of the K30.



Using the cleanly installed painted tow mirrors from a 2012 Chevy help Miller while he tows large loads.

The slick shaved tailgate paired with '84 Chevy taillights continue to refine the sleek but rugged rig.







**AMERICA'S DIESEL SUPERSTORE™**

*Call or Click to Find Out Why Today!*

NO GOAL TOO SMALL  
NO BUILD TOO BIG  
EST. 1999



**888.99.DIESEL**

**WWW.DIESELPowerPRODUCTS.com**



Between the heavy roll cage and the plush King Ranch seats, this truck is ready for anything from cruising the roads to sliding through the forest.



The white and tan interior comes together well with Miller's many personal touches of bandana shifter boots, his wife's gift of a mahogany steering wheel, and uniquely placed gauge pod.



This crank lever allows Miller to adjust the 'tune' of his Cummins by manually adjusting the injection pump as he drives.



A JL Audio amp powers a single JL Audio 10-inch subwoofer along with Pioneer 6x9 speakers in each door controlled by a JVC head unit.



Being an award-winning show truck doesn't stop Miller from utilizing its power and durability as a workhorse.





**K4163A**

'11-'15 CHEVY/GM  
6.6L DURAMAX  
DPF BACK DUAL  
EXHAUST

## DIESEL PARTICULATE FILTER BACK EXHAUST KITS

WE OFFER A FULL RANGE OF 4" & 5" DIESEL PARTICULATE FILTER BACK PERFORMANCE EXHAUST KITS IN ALUMINIZED AND 409 STAINLESS STEEL FOR FORD, DODGE & CHEVY FROM 2007.5 - 2015

**DIAMOND  
EYE** Performance



#221043  
'94-'02 DODGE  
4" HX40 TURBO  
DIRECT PIPE &  
V-BAND CLAMP

**DIAMOND  
EYE** Performance

NEW BIGGER  
EMBOSSED TIPS



EMBOSSED  
4"x7" & 4"x8"  
5"x7 & 5"x8"  
BLACK AND  
STAINLESS STEEL  
TIPS

**DIAMOND  
EYE** Performance



#126006  
2003-2007  
FORD 3.5" ALUM  
DOWNPIPE KIT  
W/ OFF-ROAD  
PIPE

**DIAMOND  
EYE** Performance



#321099  
1993-2001  
CHEVY/GM 6.5L  
2.5" PERFORMANCE  
CROSS-OVER  
PIPE

## QUICK CONNECT COUPLERS

VIDEO AVAILABLE

**You Tube**

DIAMONDEYEMFG  
CHANNEL



- Utilizes CNC machined flanges and high performance band clamps for sealing.
- 100% Customizable for any 4" or 5" tubing



**DIAMOND  
EYE** Performance

shiny side down. To create a one of a kind interior he installed heated and powered King Ranch brown leather seats and center console from an F-150. He customized the dash as well with several unique components, such as the lever to control his manual 'tune' and installed Auto Meter gauges to monitor EGT, boost and oil pressure in a pod mounted to the dash along with the factory gauges in the color-matched white factory cluster. He upgraded the mirrors, locks, and windows to powered options and even installed a Vintage Air A/C unit. His personal touches abound in the interior from the line-lock and brake adjustment controls, injection pump tuning crank and even white bandanas as shifter boots. He also fit in a painted Suburban tilt column. But one personal touch stands out, showing his wife Jamie's wholehearted support of the project with the gift of

a beautiful mahogany steering wheel.

Whether cruising down the road or working on the farm in your dream truck, you need your tunes to sound right. To improve the acoustics and to deaden road noise inside the cab, Miller filled the roof with foam and layered everything else with Dynamat, even doubling up against the firewall. A JVC head unit—another gift from his wife—controls a sound system with four Pioneer 6X9-inch 5-way door mounted speakers, a JL Audio XD500 5-channel amplifier, and a JL Audio 10-inch subwoofer to fill the cab with their favorite songs. With enough toys wrapped up into the one truck to make any man jealous, Miller thought it wise to protect his great white beast with a Viper security system and a hidden GPS tracker with its own independent backup power.

Standing back and admiring his heavily

customized '89 K30, Miller is able to say, "Nailed it!" a thought mirrored by the Shied Diesel Extravaganza judges that named him the first place custom truck in their 2014 Show-N-Shine contest. He touched and remodeled almost every single piece on his truck, grafting together pieces from the Big Three American manufacturers to blend together his perfect truck. Doing most of the work out of his barn between working on his farm and running an equipment company didn't deter him over the years. Instead, he fully accomplished his goal by creating a new "old-truck" with every modern amenity he wanted, without the computer control issues, creating a machine that is reliable, fun, and turns heads with the power he needs and the economy he wants...or maybe vice-versa. This Great White was a dream come true after years of work for Eric Miller. **UDBG**

Miller truly left no stone unturned as he delved into every nook and cranny of his rig to refine and customize it to have every single thing he ever wanted in a truck sewn up in one awesome machine.





GIVE YOUR VEHICLE AN  
**ENERGY  
BOOST**  
YOU CAN FEEL!

# ELECTRIFYING!

## POWER ⚡ PERFORMANCE ⚡ MPG



⚡ 3 levels of the most powerful & efficient engine tuning available

⚡ Tow at the vehicle's maximum weight rating at all power levels

⚡ Increased fuel economy...  
Users report 1-3 mpg gains

⚡ Safe EGTs at all power levels

⚡ Works great with bolt-ons like cold air intakes & exhausts

⚡ Application-specific performance features

⚡ (!) New! Adjust TPMS pressure warning for larger tires

⚡ Quick & easy plug-and-play installation - No tools needed

⚡ Emissions certified 50-state legal\*

# MAX ENERGY 2.0

POWER PROGRAMMER

## GOT BIGGER TIRES

And only want to recalibrate your speedometer?



- Corrects speedo for tire sizes up to 54" (depending on application) and/or non-stock rear gear ratios
- Read/display/clear DTCs...Plus plug-and-play install

Available For  
Cummins  
EcoDiesel  
Duramax  
PowerStroke



[hypertech.com](http://hypertech.com)



30-day money back guarantee  
Return to place of purchase  
Shipping/handling still applies

# HYPERTECH

The World Leader In High-Performance Engine Tuning Products

\* Application specific - See website for details.

© 2016 Hypertech, Inc.



# BUILDIN' A 6.7L CUMMINS

## Sweatin' the Details to Build a 600-Horsepower 6.7L Cummins.

TEXT AND PHOTOS BY JIM ALLEN

**B**rad Lucia started with a bare bones Cummins 6.7L common rail long-block as a blank slate in his quest for a powerful yet reliable diesel power plant for his project truck. He was looking for a good basis for a pulling and work truck, and wanted a streetable truck with some potential for more powerful modifications down the road. The recipe is simple: injectors, turbo, manifolds, fuel delivery, electronics and a few durability mods. This combination will serve Lucia well and could be a great foundation to any Cummins diesel swap or simply an upgrade for the Cummins already sitting under your hood. Follow along over the next few pages to see what goes into making a reliable 600+ horsepower with a 6.7L Cummins engine.

Everything is nailed down but the exact tuning he will use, so we'll show you some of the goodies that were bolted on prior to the installation of the engine in his project truck. This includes ARP Custom Age 625+ head studs, BD's Super B Special Turbo and matching manifold, Dynamite Diesel Performance injectors, H&S Performance rail pressure regulator shim kit and Shibby Engineering Intake elbow. With the engine out, it's easier to show the parts installed and procedures done to the engine without all the standard underhood stuff getting in the way.





## ARP CUSTOM AGE 625 HEAD STUDS

Being able to contain and harness the fires of a highly boosted performance diesel is really job one in a buildup. The 6.7L engine is particularly well off in that area, having a factory fitted MLS (multi-layer steel) head gasket and better than average head bolts. It's claimed that the stock setup is capable of supporting 800+ horsepower but that's a demon you don't want to thumb your nose at when you have access to ARP's Custom Age 625+ head studs.

The Custom Age 625+ kit is a step above the standard ARP2000 grade kits. The Custom Age alloy has tensile strength in the range of 260,000 to 280,000 psi vs. 200,000 to 220,000 for the ARP2000. Combined with a new Cummins MLS head gasket, we think the head will stay firmly attached even if the truck later goes into the mega-power realm.

There have been persistent hints from several good sources to watch for head warpage on 6.7L heads, even a low-mileage head like ours. We honestly don't know the extent of this, but took the precaution of checking the deck for straightness and we advise you to do so as well. Ours was perfectly straight. Here's the step-by-step on the head studs. We figure you'll have the manual handy for the regular stuff, so we'll cover the high spots.



**01** While we were waiting for the body shop to finish the truck, our highly motivated diesel tech, Kurtis Reichley, got the long-block ready for primetime by installing many of the performance goodies onto the engine, including this BD Power Super B Special Turbo.



**02** When we got the ARP Custom Age 625+ studs, it was a new kit for the Cummins and we appreciated ARP taking care of us when there weren't many in circulation yet. They're among the strongest sets of head studs you can buy for a Cummins, but still very affordable. These kits aren't cheap, but considering the strength and anti-corrosion features, they're a heck of

a buy. ARP pioneered the use of this particular alloy.



**03** While not strictly necessary, it's a wise idea to buy a bottoming tap to chase the head stud threads. You want to be sure that the threads are free of burrs, rust, sealant or anything else that would prevent full seating of the new studs.



**04** We discovered that some of the threaded holes were not tapped as far as others, so Kurtis Reichley, our master tech, made sure they were. In comparing the left to the right, you can see nearly a quarter-inch of difference. Most of them were around 3/16-inch. This would only

matter if some of the studs would not screw down all the way and a few of ours didn't. You want as much thread engagement as possible.



**05** With threads in the block super-clean, install the studs by hand. There are long studs and short ones. The short studs go on the side of the head with the exhaust manifold; e.g., the passenger side as the engine would sit in the truck. Normally you don't lube these, nor use Loctite. They can be Loctited if desired (may "The Force" be with you in getting them out again) but you need to do the rest of the assembly and torquing before the Loctite sets up.



**06** When you hear the term multi-layered steel, this is what they're talking about... several layers of high-temp steel connected at the fire ring. Very strong! Reichley used a Genuine Cummins gasket, part number 4932210. One very important aspect of using MLS gaskets is that you need an exceptionally smooth deck surface, around an RA finish of 8-12. Because the coating on the gaskets for sealing oil and coolant is pretty thin, a coarse finish doesn't seal the coolant and oil very well. Because our engine was factory equipped with an MLS gasket, it was set. If you were converting to an MLS, you'd need to have your block and head resurfaced to a smoother finish.



**07** The gasket slips over the studs with no additional sealant needed. The gaskets are treated with a sealant.



**08** Setting the head down on the block over the studs is a two-man job.



**09** Use the supplied ARP Ultra Torque lube to lubricate both sides of the washers and also the threads on the studs. This is a vital element to getting the correct torque on the studs.



**10** Install all of the nuts and washers, with the ARP lubricant, run them down lightly and prepare for a workout. Using the manufacturer's recommended pattern (which is also shown on the ARP instructions), torque the nuts to 150 ft-lb in three equal steps. You can reinstall the rockers

and run the valves, but you will face a small adaptation job when you install the rocker cover.



**11/12** You will find that the aluminum rocker housing will interfere with one of the head bolts at the rear of the block and not allow the aluminum cover to bolt down flush with the block (see red arrow). Potentially, you could get it all back together and not notice... big oil leak! Use a die grinder to notch out the aluminum so it will clear the nut.

## DYNAMITE DIESEL PERFORMANCE INJECTORS

Injectors are one of the keys to performance and among the best injectors you can buy are those from Dynamite Diesel Performance. Lenny Reed, owner of DDP, lives and breathes injectors and he's amassed quite an arsenal of testing and production tools. Our injectors were low-time units, so they didn't need much, but Lenny and his crew worked them over to his exacting specs.



**13** Nozzles are the key and DDP has a proprietary design that uses extruded honing to achieve optimum flow. DDP also goes above the nozzle to optimize and equalize the flow in a set of injectors for a particular engine. In this case, a set of "90 hp" nozzles was installed and the flow rating among the six injectors equalized to 1cc or less. The new injectors flow 28 LPM (liters per minute) versus the stock 18 LPM.



**14** Stick the copper washers on with a little grease and lube the o-ring well with motor oil. The injector bore needs to be spotlessly clean. On a 6.7L engine that has the stock thickness head gasket and no material removed from the head or block decks, you would use a 1.5mm (0.060-inch) copper washer. To retain the correct injector targeting if any of above-mentioned factors were changed, you might use a thicker or thinner washer. The red arrow shows you the location of the injector inlet port; something that's important a little farther on.





**15** The injectors more or less pop in by hand but Cummins has a procedure for tightening the injectors and injector lines. Start by torquing the injector hold-down bolts to 44 inch-pounds, then loosen them.



**16** Install the crossover tube (aka "high-pressure connector") after lubing the sealing O-ring and the nut. Torque the nut to 133 inch-pounds, then go back and torque the injector hold-down bolts to a final 89 inch-pounds. Finally, torque the retaining nut to a final 37

ft-lb. This complex job ensures the tapered tip is correctly aligned in the injector inlet port.

## BD POWER SUPER-B SPECIAL TURBO AND MANIFOLD

A "bunch-o-fuel" is of little use without the right amount of air. The BD Super-B Special is one of those "just right" setups that will deliver a lot of power without glitchy street manners. It's designed for a power output of up to around 600+ hp with no "drugs." Our project target is in that vicinity. With the fuel dialed in, this turbo will deliver the right combination of performance for the owner to tow, drag race or pull. Our installation may be different than yours due to the fact that our 6.7L was starting out as a bare engine.



**17** The BD Super B Special comes in three different kits, including one for our 6.7L. It includes a free-flowing exhaust manifold with a T3 foot, wastegated

Borg-Warner turbo rated for 1,160 cfm with a 64.5mm compressor wheel, miscellaneous mounting hardware and downpipe. The Super B Special is designed for around a 45-psi boost with very low drive pressure and low peak EGTs. Our application might run a little higher boost and perhaps hotter.



**18** Installation starts by mounting the manifold with new exhaust gaskets and torquing the mounting bolts to 35 ft-lb. The manifold is painted with ceramic paint and should look good for a long time but it's relatively soft and easy to scratch until it's heat cured. Take care not to bang it around.



**19** The turbo mounts are next and some of the bolts can be tricky to get at.



**20** The oil drain for the turbo is not unusual, except that for a 6.7L engine, there's an extension to account for the taller block (see arrow). The extension goes into the block drain port first and then the tube.



**21** The oil supply line goes on next and it's a great idea to pump a little oil into the turbo before you attach the oil line to make sure it's got some start-up lube.



**22** When we started the project, BD was in the process of upgrading its 6.7L kit. A part of those upgrades was a one-piece compressor housing. Brian Roth at BD was kind enough to swap our old two-piece housing for the new one-piece unit when the new parts were available. We don't know if there are any functional

performance differences, but the one-piece setup is much more compact and worked better for our project.

## SHIBBY INTAKE ELBOW

Shibby Engineering is a sleeper outfit that builds some very nice products in Michigan. Their intake elbow is highly regarded and well engineered.



**23** Step one was to install the plenum cover. The Shibby cover deletes the intake heater, but you can run the horn with the OE cover with the

permanently attached grid heater. The cover above is similar to those used on most late model Cummins 5.9 and 6.7L engines.



**24** We were able to install the fuel rail after bolting on the plenum cover.



**25** The air horn bolts on next using the new gasket supplied with the manifold.



**26** A very cool dipstick bracket comes with the kit.



**27** The aluminum piece on the end of the elbow takes the place of the throttle valve on engines not so equipped, but the OE throttle valve will bolt on there if your engine has it.

## H&S RAIL PRESSURE REGULATOR

The fuel rail pressure regulator does just what the name implies; it bleeds off excessive pressure, such as when the power is suddenly reduced to idle from full power. Pressure spikes can damage injectors and blow lines, usually at an inconvenient time. This is mostly an issue with an engine that runs a potent tune and/or a high-pressure CP3 (Bosch code for a common rail high-pressure, three-plunger pump), where those sudden pressure spikes need to be able to bleed off. The trouble is that a tuned engine usually runs higher rail pressures by design, so you don't want that to bleed off with a regulator at the stock setting. H&S Performance of St George, Utah, builds a shim kit to raise the relief pressure.



**28** The rail pressure regulator mounts at the end of the fuel rail and screws out. According to H&S, the standard regulator setting is around 25,000 psi. The H&S kit will raise that limit to 27,000-28,000 psi.





**29** The kit includes a special nut that allows you to pull the regulator apart in a vise. Use wood or another soft material in the vise so you don't damage parts. There's an internal spring, so watch that the unit doesn't fly apart and you lose the spring in the nether regions of your shop. There's also a tiny pin in the cap (the part that's still in the vise) that's easily lost.



**30** Once apart, you add the three shims under the spring.



**31** Press the pieces back together in the vise and use a canter punch to re-stake the cap into the cover.



**32** Reinstall the regulator after lubricating the o-ring and torque it to 50 ft-lb.

## FINISHING TOUCHES

To supply plenty of clean #2 to a potent engine like the 6.7L Cummins built for this project, it is a good idea to use an aftermarket lift pump and filter system. The AirDog II DF-165 system is a popular choice and one that Brad Lucia chose to go with for his project truck.

**UDBG**



**33** AirDog's AirDog II kit deliver 165 GPM at a factory set 15-17 psi, but you can adjust it higher or lower. The benefits of the AirDog are many, including air-free fuel in copious amounts and fuel cleaned down to 2 microns. As time goes on, AirDog continues to figure out ways to make the installation even easier.

**SOURCES:** ▶ AirDog [PureFlowAirDog.com](http://PureFlowAirDog.com) 877.421.3187

▶ ARP [ARP-Bolts.com](http://ARP-Bolts.com) 805.339.2200

▶ BD Power [DieselPerformance.com](http://DieselPerformance.com) 800.887.5030

▶ Dynomite Diesel Performance [DynomiteDiesel.com](http://DynomiteDiesel.com) 360.794.7974

▶ H&S Performance [HSPerformance.com](http://HSPerformance.com) 888.628.1730

▶ Mac & Bob's Service Garage [MACNBobs.com](http://MACNBobs.com) 419.422.4462





If you are serious about getting out to remote areas for your camping adventures but don't want to leave luxury behind, this might be the adventure camper for you.



# ADVENTUROUS

## Phoenix Pop Up Campers' Mitsubishi Fuso Adventure Camping Rig

Text and Photos by Steven T. Williams

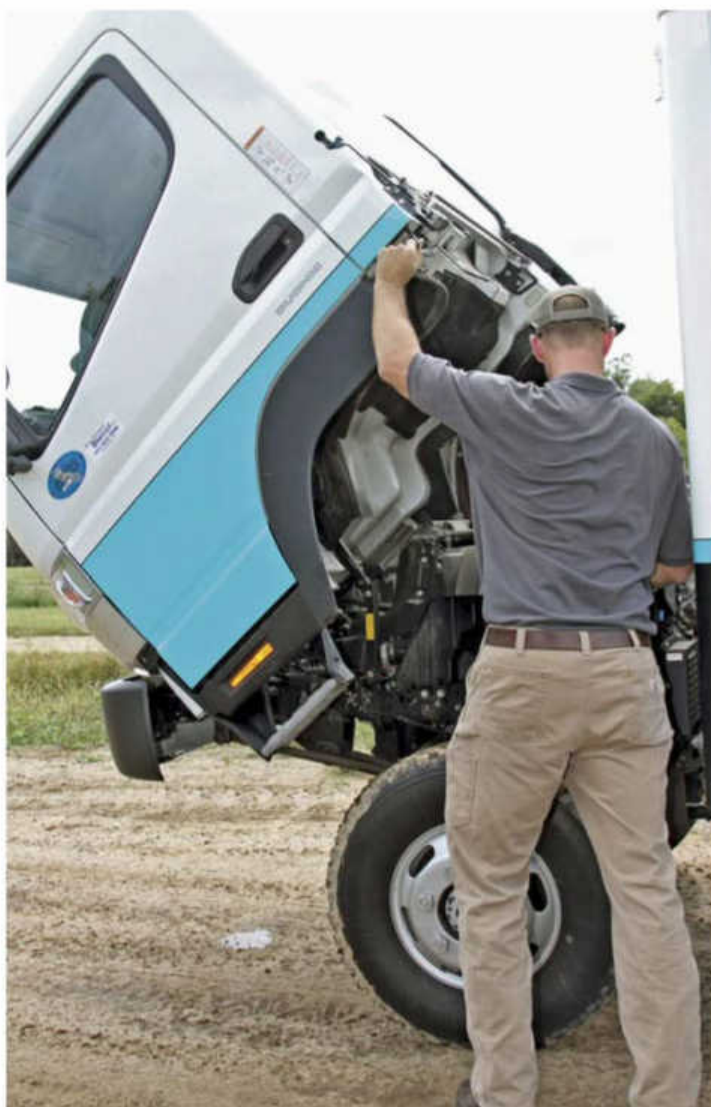




Overland extreme adventure camping is a growing trend worldwide with more and more people wanting to take their camping into remote areas. While some overland campers resort to old Jeeps towing highly mobile yet primitive camping trailers, more luxury overland adventure camp rigs have been cropping up lately. Rob Rowe is the president of Phoenix Pop Up Campers in Denver, Colorado, a company that has been building off-road campers dating back to the early 70s, long before they became popular. Rob and his wife Cari wanted to build a new demo vehicle to promote their business and the overland extreme adventure lifestyle at rallies and shows across the country.



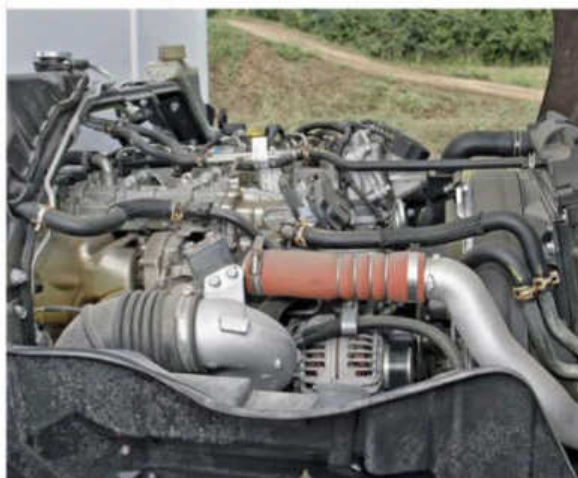
Peeking under the front of the truck, you can see the strong front axle (trussed from the factory for added strength) riding on a set of stout leaf springs to handle heavy loads and articulate well in the dirt.



The cabover FG4X4 is easy to lift to service the 4-cylinder common-rail turbo diesel lying below the cab.



The 3.0L DOHC 4-valve per cylinder, inline 4-cylinder diesel engine in the FG4X4 is turbo charged, intercooled and rated to deliver 161 horsepower at 3,400 RPM along with 295 lbs.-ft. of torque down low at only 1,300 RPM.





THE INDUSTRY LEADER IN INNOVATIVE QUALITY & UNMATCHED DESIGN

# Royalty Core

## TRUCK GRILLES

541-343-3643

1-800-741-7212



UTV GRILLES



ICONIC ROYALTY CORE  
T304 STAINLESS STUDS



BILLET HEADACHE RACK



RCR RACE LINE



RCRX RACE LED TOP MOUNT



RC3DX INNOVATIVE



RC2 TWIN MESH



RC2X X-TREME



RCRX RACE LED



RCX EXPLOSIVE



[WWW.ROYALTYCORE.COM](http://WWW.ROYALTYCORE.COM)



## A NEW RV

The couple wanted to design an RV that would be a comfortable traveling rig that would be able to go off road and still get good fuel mileage. They teamed up with Mitsubishi Fuso dealer Mike Holtzower and Southeast Diesel in Chattanooga, Tennessee, to blend their two specialties into what could be the perfect adventure RV. Starting with a 2014 Fuso FG4X4 cabover dually cab and chassis truck, the Rowe's designed their perfect RV. After the design work was complete, the build team in Colorado went to work fabricating the welded aluminum cage frame for the camper and began work on the rest of the camper body. Once the assembly was ready, it was mounted to the Fuso and the interior components and furnishings were installed. The entire process took about six months to complete while the shop was also cranking out customer orders.

All Phoenix Pop Up Campers are custom built to the owner's design specifications, and they can create campers for just about any vehicle imaginable. Since this one would be a demonstrator for the company, they were sure to equip it with many of the luxury offerings including a flat screen TV, complete audio/video system with speakers inside and outside the camper, plush UltraLeather upholstery, solid surface countertops and high-end wood cabinetry throughout the camper. Once the overland adventure RV was completed, the Rowe's lived in it for several weeks while touring across the country to various shows and events—and they love it.

The rear axle housing is larger than the front and can hold up to whatever abuse you throw at it.

Notice the driveshaft loops that are included from the factory on both sections of the two-piece rear driveshaft.



Inside the cab there is room for three with a separate bucket seat for the driver along with the combined seating for the passengers in a 60/40 type of split. The high seating position gives you a commanding view out of the nearly vertical windshield. This truck was equipped with the optional Clarion head unit with built-in Bluetooth capability.



The forward portion of the Phoenix Pop Up Camper is the seating/dining area with comfortable teal Ultra-Leather upholstery and a removable table that can be converted into an additional bed.



After getting to a remote camp site, you can be ready to go in just a couple minutes by popping the top with the motorized actuators inside the camper and easily installing the collapsible aluminum staircase and hand rail.









The center of the camper is the galley kitchen where the custom campers can be configured with exotic tile and solid surface countertops to provide an overland camping experience with a luxurious touch.



The rear of the Phoenix Pop Up features a large bed along with a fold-down flat screen TV monitor that can swivel to be viewed from the seating area or the bed.



Ample storage spaces and cubbies are built into the camper as well as access panels to get to the fuel, DEF and water tanks.



Reliable manual locking hubs up front ensure that when you want the truck in 4WD, it is in 4WD. The aggressive tread pattern on the 235/85R16 Yokohama LT Radial 742 tires offers good traction in the dirt without being obnoxious on the pavement.



The rear of the camper is undercut to allow the FG4X4 truck to retain a departure angle similar to the approach angle up front to allow the driver to traverse difficult off-road passages that no standard RV could even consider.





**SUNCOAST**  
DIESEL TRANSMISSIONS

800.868.0053 | [SUNCOASTDIESEL.COM](http://SUNCOASTDIESEL.COM)



Mike Holtzower from Southeast Diesel wheels the Fuso rig up some of the trails at the Adventure Off-Road Park in South Pittsburg, Tennessee, showing off the trucks capability despite its size.



While it may look like the rig is ready to topple over, it was very stable through the trails. Obviously, it's not ready to compete with purpose-built rock crawling rigs, but with a six-tire footprint, and a diesel engine to propel it through the rough stuff, this RV is ready to go places other RVs can't.

## LOOKING AT LUXURY

The luxury camper rides on a standard Mitsubishi Fuso FG4X4 chassis and seats three up front in the cab. It rides on traditional straight axles both front and rear with leaf spring suspension to reliably handle heavy loads and long term use. A 4-cylinder 3.0L turbo diesel engine is at home under the cab; it propels the truck with a modest 161 horsepower at 3,400 RPM and 295 lbs-ft. of torque at only 1,300 RPM. When compared with the performance numbers, we see from performance-built modern trucks the engine may seem underpowered for a rig this size, but it does very well largely in part due to being mated to

the Mitsubishi Fuso DUONIC 6-speed OD automatic transmission which does not hunt for gears and keeps the engine in its power band to motivate the big RV down the road well. We had the chance to drive the rig on some trails at the Adventure Off Road Park in South Pittsburg, Tennessee, as well as on the freeway and in city traffic, and it performed very well. Since the camper has a pop-up top, it is not overly tall and the high seating position and large mirrors give the drive an excellent view of traffic all around the RV.

## IT'S A BIG WORLD

For those that feel adventurous, a custom

FG4X4/Phoenix Pop Up combination might be just the ticket for your camping needs. Check this one out, and if you think it might be the right fit for you and your family, give the Rowe's and their crew at Phoenix Pop Up Campers or the team at Southeast Diesel a call and tell them your friends at *Ultimate Diesel Builder's Guide* sent you.

Where can you go in an adventure camper? Maybe a better question would be where can't you take your adventure camper? It's a big world, and most of it isn't paved; one of these rigs would be a great way to explore.

**UDBG**



Each Phoenix Pop Up Camper is custom configured to the owner's preference; this particular one is considered one of their Deluxe Luxury RV Bodies offering plenty of room for family adventures far beyond the reaches of a typical RV or an RV campground.





**For those that  
use & abuse their  
diesel truck**

**Fuel tanks tough enough for;  
The rocks of Moab  
The high speed trails of Baja  
The mud & yuck of the back country**



**TITAN Spare Tire Aux Fuel System**

**TITAN In-Bed Transfer Tank**



**TITAN Mid-Ship Replacement tank**

**TITAN TANKS ARE MANUFACTURED  
WITH MILITARY GRADE, CROSS-LINKED  
POLYMER WHICH PROVIDES A  
TOUGH & RUGGED, PUNCTURE  
RESISTANT, LONG LASTING  
FUEL TANK**

**See how tough they  
are for yourself!**



  
**TITAN**  
FUEL TANKS  
[titanfueltanks.com](http://titanfueltanks.com)

# THE FLYING



There are a handful of vehicles that are so iconic that every gearhead on the planet knows them from bumper to bumper. These rides are usually completely custom, one-off designs that inspire generations after to build, recreate, and customize their own versions. Cars like the Batmobile, KITT and the General Lee, or huge vehicles like the Weinermobile and the Big Foot

monster truck.

A builder and collector, Ryan Abbott, CEO of RodItAll.com from Carlock, Illinois, set out to build another one-off vehicle to wow and inspire as well as become his Roditall shop truck. Thus, the Flying Pickle was born.

Abbott had a year-long build ahead of him as he started with the \$1,000 purchase of a 1953 Chevrolet Cab Over Engine truck that

he located through McClean County Auto Salvage. The big trucks have been the target of many custom builds and restorations over the years, but this one was in for a very unique overhaul all on its own. In Abbott's own words, the Chevy was in extremely bad shape upon purchase, but that didn't faze him with the plans he had in mind and his familiarity with custom builds through the years. Doing all the



# PICKLE



## RYAN ABBOTT'S EYE-CATCHING CUSTOM '53 CHEVY COE

TEXT: KYLE TOBIN  
PHOTOGRAPHY: DION SMITH

work himself would take time, understanding from his wife Cindy, and support from Dustin Kistner and the Roditall crew.

### FIRST THINGS FIRST

The chassis would have to be totally fabricated and blended together with other frames to suit the needs of the large truck he had planned. Marrying half of a 1-ton Chevy frame

into the rest of the custom fabricated frame would take some doing but would lend strength and stability to the 125-inch wheel-base. Up front, Abbott incorporated a beefy '85 Chevy 3500 front axle, keeping the stock differential for the 4WD system. The rear end would take some more fabrication to work into the design. Abbott created a totally custom trailing arm set up complete with Panhard bar

and Air Lift Dominator springs to support the '74 14-bolt rear axle stuffed with diesel friendly 3.23 gears. To get the COE rolling, Abbott went with polished aluminum 19.5-inch Eagle Alloy series 056 Dually wheels all the way around, wrapped in Goodyear 225/70R19.5 G124's in the rear and Yokohama 225/70R19.5 fronts.

With the chassis fabrication complete,

Abbott was now ready to turn his attention to the powerplant for the big green bombshell he was preparing to drop. Having plenty of experience installing Cummins 12-valve engines in his custom vehicles, Abbott found a '93 5.9 L for the heart of his beast. A few modifications would get the green streak burning rubber while maintaining reliability to perform as his shop truck. Abbott outfitted the motor with an M&H Inc fuel pin #5 fuel plate, AFC modifications, and 3,000 RPM governor springs. He also relocated the intercooler to the side of the frame. This package works well for the shop truck providing plenty of power for towing or hauling with an estimated 300 horsepower and around 600 pound feet of torque, so it still gets good economy too. The Cummins engine is backed by an Allison transmission to reliably put the power to the wheels cruising at low speeds in parades or blasting down the interstate in overdrive.

The custom fabrication was far from over as Abbott began turning his attention to the body. The existing COE cab was chopped in half and grafted with a five window cab which was mounted with hydraulics to the frame to enable the whole cab to tilt forward for easy access and display of the engine bay. The bed was completely fabricated to be six inches wider in the rear as well as at the fenders to balance the look of the truck. With extensive custom cutting, welding, grinding and body work, Abbott had sculpted the old '53 into a one-off beauty. But, he wanted to make the whole rig grab your eye from a mile away.

Doing all the beautiful bodywork himself, Abbott managed to make the cut and chopped amalgam of parts ranging from the 50's to the 90's look seamless. It was as if the factory had churned it out, yet you wouldn't ever see another one exactly like it. But all the careful detail would be lost without a vibrant paintjob to draw the eye and highlight the curves. When Abbott came across the Lime Squeeze color, he knew it was meant to be. With the pale electric green sprayed onto the curvy truck, the name slapped Abbott in the face, as he pictured the big quirky green pickle of a truck flying down the road. Fogler Signs whipped up the branding and name graphics to christen the machine while Brandon Lovell expertly scribed the flares of pinstriped accents. Complete with the eccentric logo emblazoned onto the doors and crowning bursts of hot rod pinstriping throughout, the Flying Pickle was born.

Leaving no detail spared, Abbott turned his



Popping the hood on this Cab Over Engine truck just gives you a sneak peek at the mechanisms keeping the engine alive plus a glimpse at the loud air horn set up.



The meaty Goodyear tires give plenty of grip attached to the fabricated and beefed up rear end of the custom chassis. Abbot widened the fenders to cover the dual rear tires while blending seamlessly with the rest of the custom bodywork.



This basic 12-valve Cummins looks right at home below the cab of the '53 Chevy, making it a perfect shop truck to pick up parts, engines and cars from far and wide.

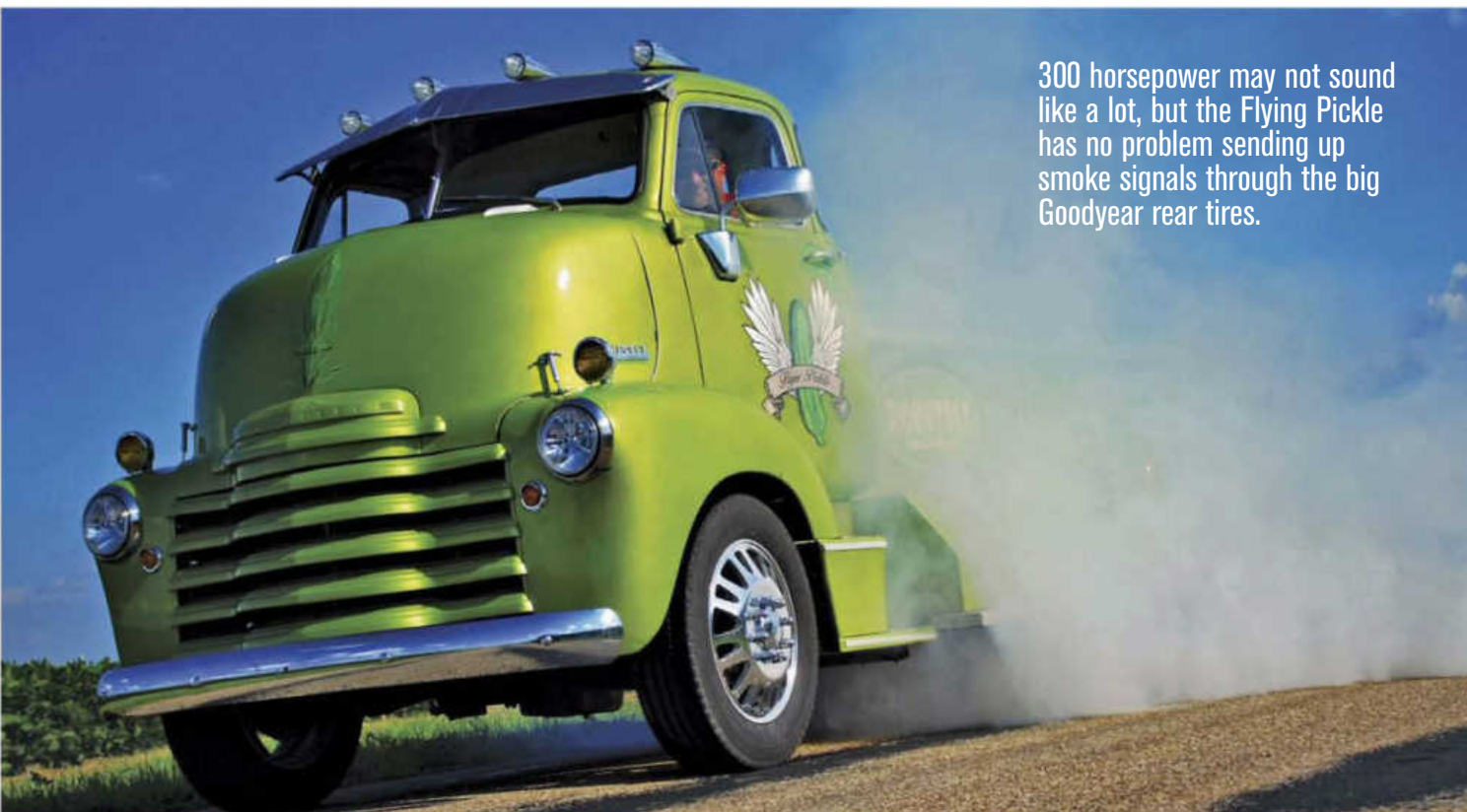




The clean interior sticks with the hot rod theme with its wood paneling, paint-to-match dash and trim, black leather bench seat and chrome steering column.



These Dolphin gauges do the job and do it well both in feeding all the necessary information and in keeping with a simple cruiser exterior.



300 horsepower may not sound like a lot, but the Flying Pickle has no problem sending up smoke signals through the big Goodyear rear tires.



Fogler Signs came through for Abbott on the one-off Flying Pickle logo and other decals.



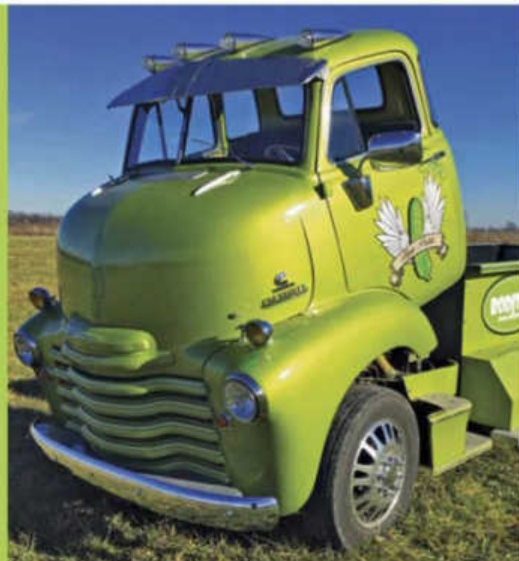
Brandon Lovell displayed his hot rod expertise on the pinstripes that add depth to the slick truck across its body.



attention to the interior of his classic cruiser creation. The bright paint shines across the steel dash inside the cab, pairing nicely with the black leather covering the bench seat and top half of the billet steering wheel. Abbott kept with the DIY approach when he recovered '85 Chevy seats himself. With Kaine Hilt providing the wood, Abbott made custom door cards and a headliner out of beautiful wood paneling, adding a subtle class and retro vibe to the hot rod truck. To give the truck some tunes, he installed a new head unit in the steel dash along with performance speakers for the mids and highs and a pair of subs behind the seat. Installing a set of analog Dolphin Gauges gives Abbott all the info he needs while rounding off the slick interior.

Though the Flying Pickle sounds like the

name of an appetizer from a '50s diner, the name will likely stick in the head of anyone that catches a glimpse of the huge, curvy, powerful, cruiser hot rod. But this custom flagship vehicle is anything but a slouch, driving about 1,000 miles every month hauling parts, engines, cars, and even musicians on a trailer through parades. Abbott had a clear picture in mind when he found the decrepit '53 Chevy COE and through a year of hard work, custom fabricating almost every square inch of the truck, he made the picture come to life. The Flying Pickle is a showstopper and jaw-dropper, whether it's burning rubber on the road, showing off at the shows, or hauling parts across the highways, and will be indelibly inked in our minds as one of the most unique diesel builds we've ever seen. **UDBG**



Custom fitted hydraulics allows the whole cab to tilt forward to peer into the engine bay.







The Flying Pickle has earned its stripes as a one-off custom machine capable of use and abuse while drawing onlookers from a mile away.



Abbott cleanly fabricated the bed to be six-inches wider in the fenders and tail to fit the stance and look of the truck.

With every square inch addressed, the customized rig looks seamless in its lime squeeze paint, despite the grafted pieces and fabrication work throughout.





# WICKED



**“THE COMPLETE ROLLING CHASSIS AND BODY WITH NO ENGINE OR TRANSMISSION COMES IN AT AROUND 1,200 POUNDS, WHICH IS DARN CRAZY”**

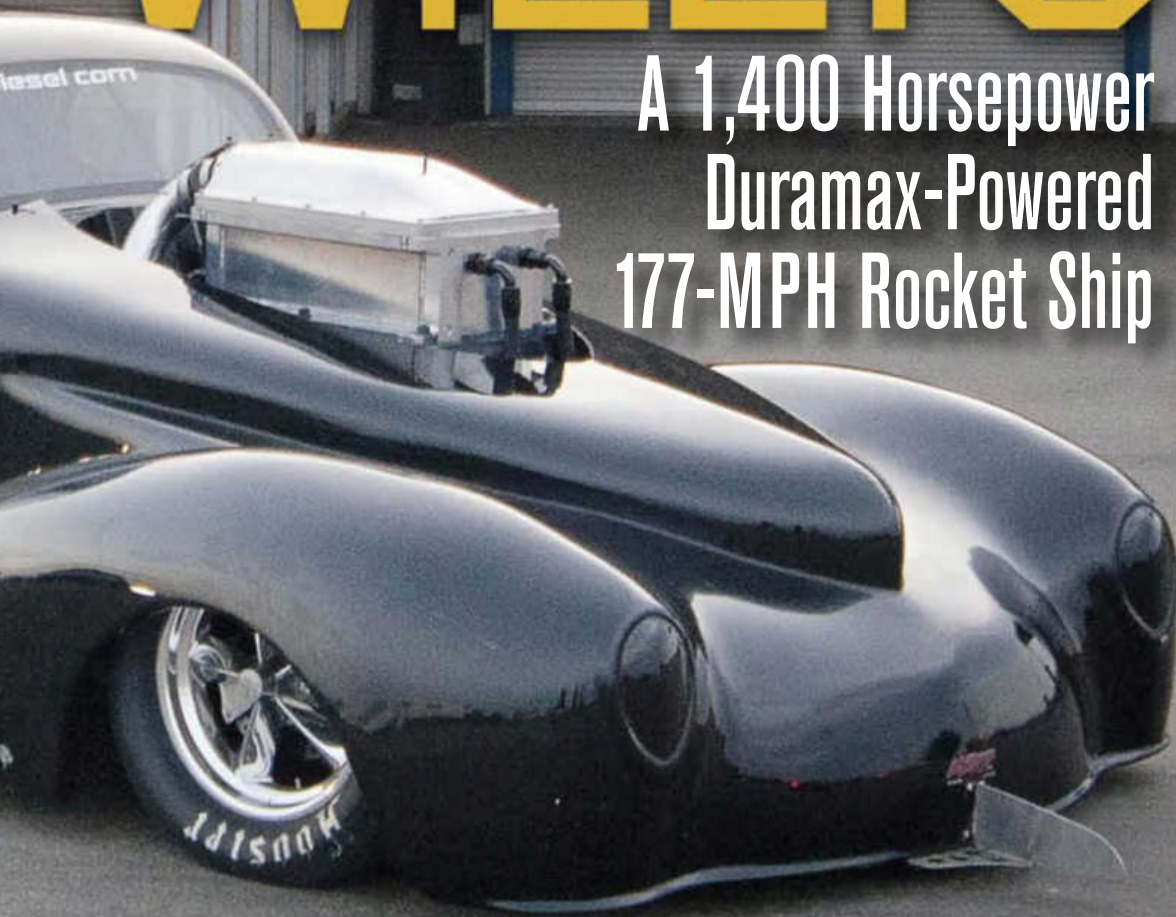


TEXT: JASON SANDS  
PHOTOGRAPHY: JASON SANDS  
AND ADAM BLATTENBERG

If you've ever looked at a full-size diesel truck flying down a dragstrip and thought "I wonder what that engine would do in something lighter," you would not be alone. Diesel trucks are awesome all-around vehicles, but for all-out speed, their 6,000-8,000 lb. weights hurt quite a bit. Brad Makinen thought diesel trucks were dang heavy too, so he decided to do something about it. In 2007, he debuted the "DirtyMax," a tube chassis drag truck that he'd stuffed in a Duramax. Although the truck eventually ran mid-8s in the quarter mile, the 3,460-lb. rig was on an outdated chassis and miles away from the 2,350-lb. minimum of the Pro Stock Truck class.

# WILLYS

A 1,400 Horsepower  
Duramax-Powered  
177-MPH Rocket Ship





A couple years ago, Brad got tired of racing against lighter, newer rides and decided to build one for himself. Partnering up with MBRP Exhaust, Brad started his new build with a 1941 Willys Pro Mod body, and a 2001 6.0-second certified chassis, built by Tommy Mooney. The chassis itself is chromoly steel, and built with double-frame-rails, for maximum resistance against a diesel engine's massive torque. It's also very light, and we mean very light. The complete rolling chassis and body (with no engine or transmission) comes in at around 1,200 pounds, which is darn crazy.

### MASTERPIECE DMAX

So now Brad had his new state of the art chassis, which just meant that he now needed a motor. Built with lessons learned from the DirtyMax, the 6.6L Duramax that powers the Willys is a masterpiece of engineering. Starting with a quarter-filled LBZ block, Brad stuffed the engine with Carrillo rods, Mahle pistons designed with bowls to Brad's own specifications, and surprisingly, a factory LB7 crankshaft. Main stud bolts were upgraded



The interior of Brad's Willys is all business, which means light. Anything that isn't tubing is made from carbon fiber, to keep weight down. Also visible is the Lenco CS1 transmission that handles the engine's power and torque.



Did we mention the part about it being light? The race seat for the Willys isn't so much a seat, but a few panels of carbon fiber around the 6.0-certified rollcage.



The front suspension of the Willys is traditional drag car components, designed for going in a straight line. The struts and brakes are from Lamb, and the steering is a Flaming River rack and pinion. The entire front suspension and steering weighs barely over 50 pounds.



One place where strength can't be sacrificed for weight is the rear axle, which will have to handle 40-psi launches and 60-foot times in the 1.1-1.2 second range. A Mark Williams 9-inch rearend with a custom 2.91 gear ratio and 44 spline axles supplies the power-handling capabilities, while carbon fiber brakes from Strange keep everything light.



A small aluminum radiator is all that is needed for cooling. An equally small and light fuel tank is filled with the small amount of diesel that it takes to go a quarter mile at a time.



The Duramax engine was actually quite easy to mount in the chassis. The factory mid-plate could be used with the Lenco/Bruno drive, so just an engine plate had to be fabricated up to put the LBZ block-engine in the Willys chassis.





A FASS lift pump is mounted in front of the engine to combat the enormous G forces the car sees on the launch. From the FASS, fuel then feeds twin CP3 pumps from Exergy Engineering, one of which is mounted in the factory location, and the other where the water pump used to be.



Boost pressure is provided by twin Garrett GTX4094R turbochargers. The 67mm units are wastegated to 55 psi, and are equivalent to a single turbo of more than 90mm in inducer size.

with ARP studs, and the engine also received a set of trick ARP 625 head studs. The engine was mounted low in the chassis, practically on the ground thanks to a dry sump oil system from Pacific Performance Engineering.

The parts that make power are top notch as well. An experimental camshaft from Hamilton

Cams actuates a set of titanium pushrods from Trick, before opening the valves of the Wagler Racing cylinder heads. Built as a joint venture with Brodix, the CNC ported heads flow a whole lot more than the factory versions, allowing for greater power at lower boost levels. Speaking of boost, for flow and packaging purposes, the

Willis uses twin GTX4094 turbochargers, that are wastegated to 55 psi of boost with twin 60mm Turbosmart wastegates. These turbos were mounted with a custom set of headers built in-house at G&J Diesel.

For fueling, the 6.6L in the Duramax makes a big departure from the norm by running a Bosch







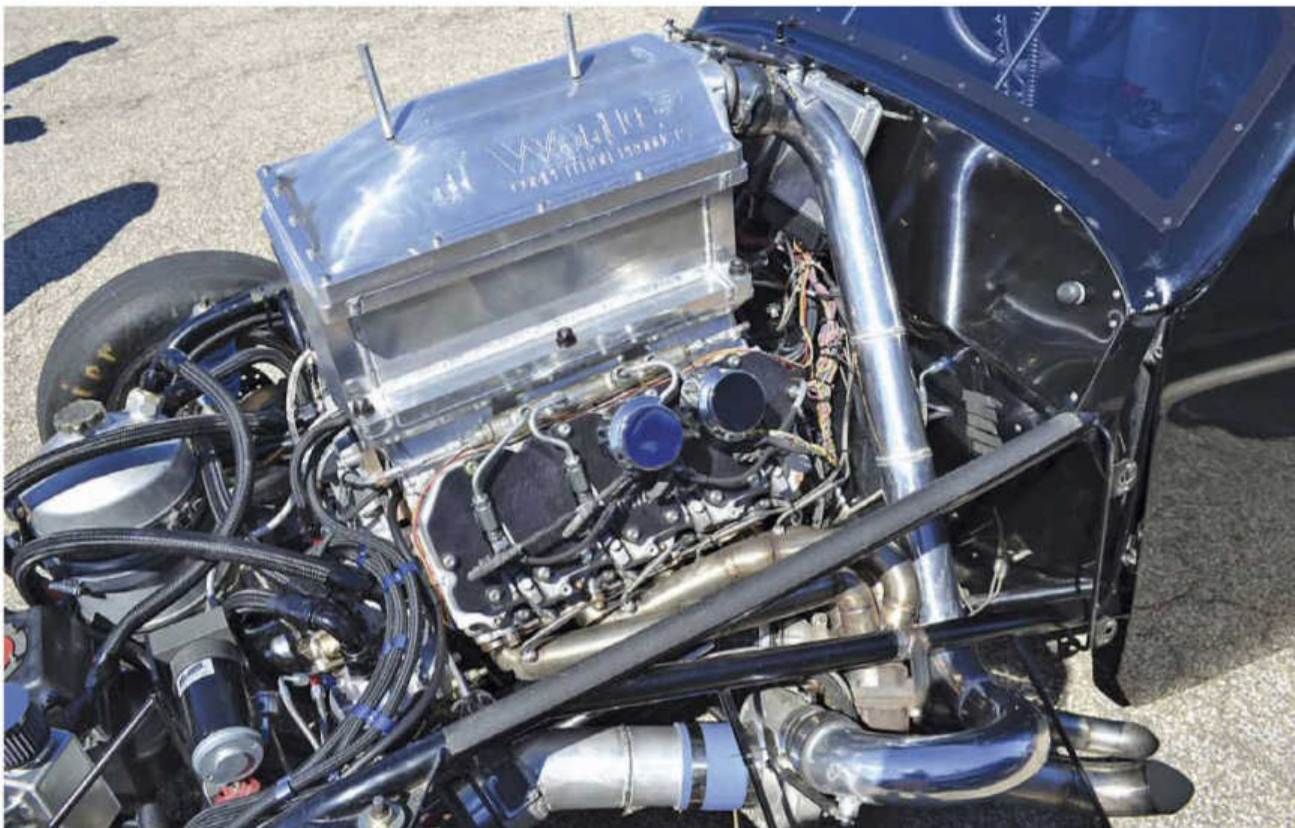
For ease of maintenance and to keep water pressure constant, an in-line electric pump is used on the Willys, rather than an engine-driven one.

Motorsports stand-alone ECU. The Bosch ECU allows virtually limitless tuning possibilities, while enabling the engine to spin to a whopping 5,750-rpm redline. Supporting the Bosch system is a 200-gph FASS system, and twin CP3's from Exergy Engineering. For injectors, Brad

**“THE  
WILLYS IS  
WITHIN  
STRIKING  
DISTANCE  
OF THE  
CURRENT  
PRO STOCK  
RECORD”**



The Garrett turbos are right at their limits at 55 psi, and a blown boot can cause a turbo to overspeed and come apart. To prevent this, every connection is equipped with boots and straps to firmly secure the intake piping.



The 6.6L Duramax engine that's mounted in the Willys is good for an estimated 1,000 rear-wheel horsepower (so far). The team hinted that there's easily another 300 to 400 hp left in it with additional tuning and more nitrous.



alternates between Dynamite Diesel units, and Exergy Engineering injectors. Tuning for the whole system is handled by Ryan Milliken from Hardway Performance.

## THE TRANSMISSION

For weight and durability, another departure from the norm was made in the transmission department. Instead of an Allison, the Duramax is hooked to a three-speed Lenco, through a Bruno converter drive. The planetary gear transmission has virtually no lag between shifts, and even incorporates a lock-up converter built with help from SunCoast Converters and Precision Industries.

## EARLY RESULTS

At a 2,600-2,700 lb. race weight, the Willys has run a best pass of 7.84 at an astounding 177mph and is getting faster every pass. Currently at around 1,000 rwhp, the team has another 300 to 400 hp left on the table, which means the Willys is definitely within striking



Nitrous oxide is used for both spooling the large parallel twin turbos, and also to add a little more oomph while heading down the track. Two 15 pound bottles send the gas to four solenoids, and four nozzles. So far the Willys has only been ran on four 0.022-inch jets, which is barely anything at all.



The crown atop of the Duramax engine is a Wagler Competition Products air-to-water intercooler intake. Designed to handle enormous boost pressures, the intercooler box ensures plenty of cool, dense air is sent into the engine.



Although the body is Willys-based, it's been heavily altered for this fiberglass Pro Modified application. A large rear wing is molded into place to help keep the rearend planted at speed.



distance of the current Pro Stock record. With a stratospheric redline, unique transmission, and powerful Duramax engine, Brad's newest ride has come out of the gate storming! **UDBG**



Extremely long wheelie bars are a Pro Mod trick to provide lots of resistance against wheelstands, yet not upset the chassis on the launch. At nearly 180 mph, stopping suddenly becomes very important. In addition to the trick braking system, twin Stroud parachutes are used to slow the car from hyperspeed.

Drag race-only wheels and tires are used, since the car only sees a quarter mile at a time. The front wheels are from American Racing, while the tires are super-skinny 25x15 Hoosier Drag Fronts.

Hoosier Tires are used in the rear as well, only this time, they're enormous 34.5x17x16 drag slicks. They're mounted on Weld Racing beadlock wheels that allow for very low tire pressures (below 10 psi) for as much traction as possible.





# DOUBLE DOWN & SAVE BIG



It doesn't get better than this. **Get 2 Great Magazines at 1 Great Price.** Combine 1 Yr subscription to **Ultimate Diesel Builder's Guide** along with 1 Yr subscription to **Diesel World** and save **73% off** the cover price  
**DON'T LET THIS OFFER EXPIRE. ACT NOW!**

**Fill out the order form below and mail it with your payment information to  
Engaged Media Inc., Lockbox # 70253, Philadelphia, PA 19176-9883**

**JUST**  
FILL IT ► CUT IT ► SEND IT

**YES! Sign me up for a subscription to Ultimate Diesel Builder's Guide and Diesel World for \$32.95 only**

That is a total of 18 issues for a total savings of \$86.87 off the cover price

Method of Payment ☐ Check enclosed ☐ Credit Card ☐ Money Order ☐ Bill me Later  
Payment through credit card ☐ Visa ☐ MC ☐ AMEX ☐ Discover Name on credit card \_\_\_\_\_  
Credit card number                 Expiration date \_\_\_\_ / \_\_\_\_ / \_\_\_\_  
Subscriber name \_\_\_\_\_ First \_\_\_\_\_ Middle \_\_\_\_\_ Last \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Phone \_\_\_\_\_ Email \_\_\_\_\_  
Signature \_\_\_\_\_ Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_

SCAN QR CODE



Alternatively, Log on to [www.engagedmediamags.com/combo\\_udbgdw](http://www.engagedmediamags.com/combo_udbgdw) and use Promo code **AN54B311**  
or call our toll free no **800-764-6278** to order your subscription. Allow 6 to 8 weeks for delivery of first issue.  
Outside US, add \$49 per year for postage. Pay in US funds only.



*Innovations in diesel performance*

## **STANDARD DEPTH AND DEEP HEAVY-DUTY ALUMINUM TRANSMISSION PANS - GM AND DODGE/RAM**

All PPE pans are constructed from high-quality cast aluminum and made in the USA.

Each pan features internal and external cooling fins. These cooling fins, combined with the aluminum construction, allow for reduced transmission oil temperatures. Cooler oil lubricates better which helps increase transmission service life.

### **Features:**

- 1/8" and 1/4" NPT stainless temperature probe access ports
- 1" stainless steel, Neodymium magnet equipped drain plug
- Robust side ribs provide additional case strength
- Deep baffles prevent "sloshing" and also help transfer heat.
- Available in Raw, Black, or Brushed finishes

### **Pans available for:**

**68RFE:** 2007.5-current Ram Trucks with the 6.7L Cummins

**GM Allison DEEP Trans Pan:** 2001-2015  
Also available in standard depth

**Dodge DEEP Trans Pan:**  
1966 to 1989-36RH, 37RH  
1989 to 1995-46RH, 47RH  
1996 to 2001-46RE, 47RE  
2002 to 2007-48RE  
All 727 transmission bodies

**GM Allison  
Standard Profile  
Trans Pan**



PPE drain plugs are machined from stainless steel with a 17mm hex fitting for easy install and removal.

They feature a powerful Neodymium Magnet to pull ferrous metal from your oil.



All PPE Pans and Covers are available in your choice of Raw, Brushed or Black finishes.



Ram  
**DEEP 68RFE**  
Trans Pan

**PPE DEEP Pans**  
hold 3-4 quarts of  
additional fluid for  
a reduction of trans  
oil temperatures

GM Allison  
**DEEP**  
Trans Pan

Dodge  
**DEEP**  
Trans Pan



## New PPE Trans Pans for 2016

**ECO DIESEL**



**Better than factory!**

**Why dispose of your filter and pan assembly?**

PPE has designed a removable, replaceable filter for regular service.

### DEEP ALUMINUM TRANSMISSION PAN - FORD 5R110

This new DEEP pan also has greater oil capacity. The higher fluid volume results in lower operating temperatures which can help extend transmission life.

Cast from high-strength aluminum for optimal heat dissipation and featuring internal baffles and external fins which transfer heat to keep your transmission running cool, keeping your operating temperatures in the right range.

**Features:**

- Robust side ribs provide additional strength
- Increased fluid capacity
- Machined 17mm hex, stainless steel, Neodymium-equipped drain plug
- 1/8 inch and 1/4 inch NPT stainless temperature access ports

**Available for:**  
2003-2007 Ford 5R110 transmissions



### HEAVY-DUTY ALUMINUM TRANSMISSION PAN - RAM 1500 (ZF 8HP70)

PPE's Heavy-Duty Transmission Pans hold extra fluid and are cast from high-strength aluminum for optimal heat dissipation.

This pan features internal heat sinks and external cooling fins. These cooling fins, combined with the aluminum construction, promote reduced transmission oil temperatures. Cooler oil lubricates better which helps increase transmission service life and reduce service costs.

PPE has engineered an exclusive removable and replaceable oil filter. That means unlike the factory part, there's no need to discard the filter pan assembly every time you service your truck's transmission. This eliminates the high cost of regularly replacing the factory filter. Now simply remove, replace filter and reinstall.

The PPE Heavy-Duty Aluminum Transmission Pan also features a high-powered Neodymium-magnet-equipped drain plug to keep harmful ferrous metal contaminants out of the transmission internals.

**Features:**

- Increased fluid capacity
- Stainless steel drain plug
- Includes replaceable filter and install kit

**Available for:**  
2013-2016 Ram 1500  
ZF 8HP370 Transmission  
V6, V8 and Eco Diesel



All PPE Pans and Covers are made in the USA

**Go to [PPEdiesel.com](http://PPEdiesel.com) or call (714) 985-4825 today to learn more.**



# RETRO ROCKET

## A Streetable D-Max-Powered Chevy Nova

TEXT: JOE DANIELS  
PHOTOGRAPHY: JOE DANIELS  
AND SULLIVAN PHOTOGRAPHY

**U**RBAN LEGEND HAS IT THAT THE CHEVY NOVA DIDN'T SELL WELL IN SOUTH AMERICAN COUNTRIES SINCE THE LITERAL TRANSLATION FOR NOVA MEANS "NO GO." DESPITE THAT REPUTATION, MUSCLE CAR ENTHUSIASTS HAVE BEEN LATCHING ONTO '60S AND '70S NOVAS AS GREAT PROJECT CARS, STUFFING BUILT SMALL BLOCKS OR EVEN BIG BLOCKS UNDER THE HOOD.



Stuffed under the hood is a well-massaged 406 CI Duramax LB7. John claims the engine makes around 800 horsepower and 1,700 lb/ft. of torque.











A Fleece Performance intake manifold is fitted with a custom-built Fleece 480 turbo. The heat shield is to prevent the fiberglass cowl induction hood from melting. Exhaust is routed through a sled-puller style hood stack.

But John Fyffe of Lancaster, Ohio, is not known for following the crowd or trends, and he opted for something way different when it came time to drop a new powerplant into his '63 Nova, which was called a Chevy II back in the day. He'd done both big- and small-block engines in drag cars, and this time wanted to do something different, really different.

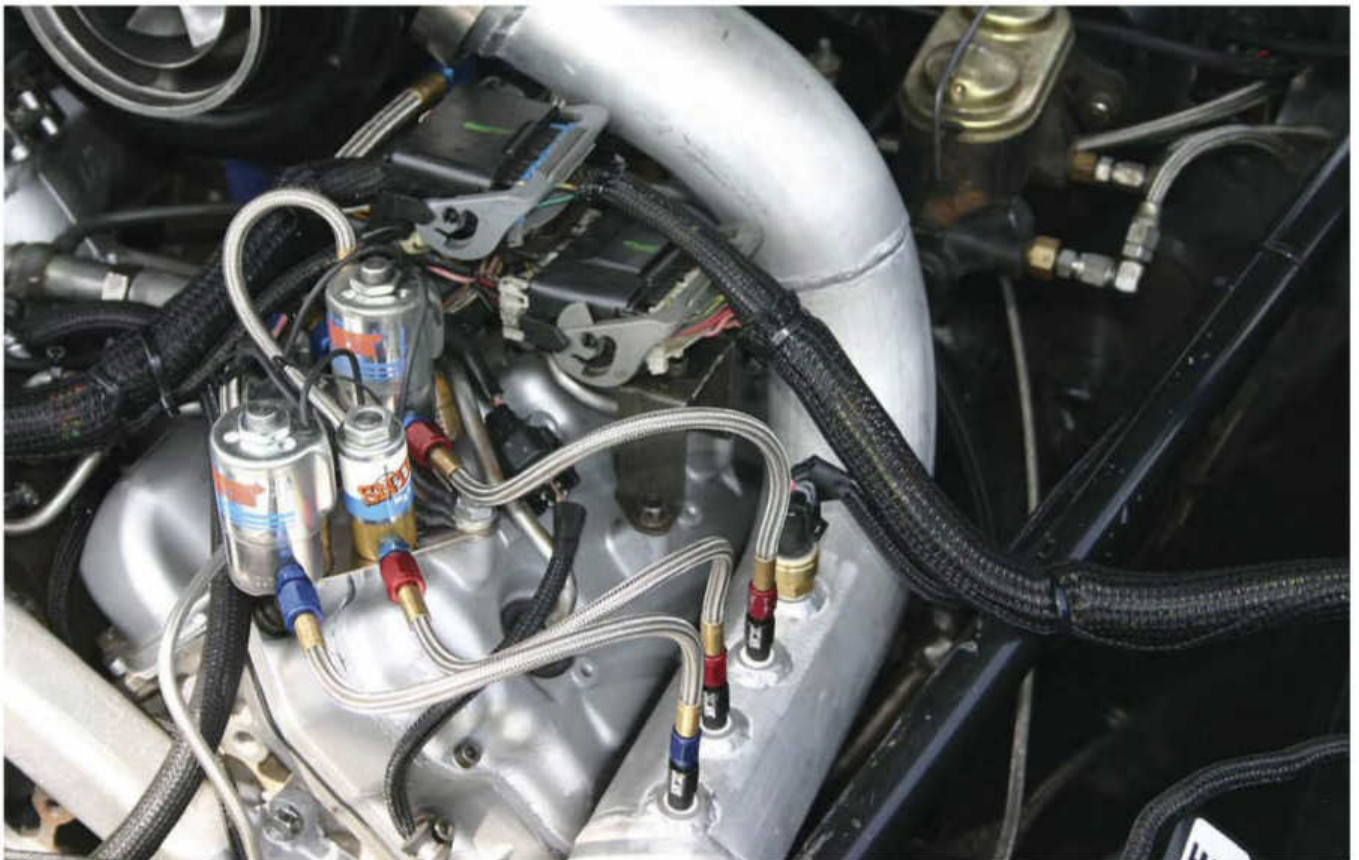
So with some help from his friends—Jeff Dean of On Track Automotive & Diesel Performance, who also runs a Duramax-powered rail dragster, and Mike Sullivan of Sullivan Racing Wiring—John somehow managed to stuff an LB7 Duramax lifted from a 2002 Chevy truck into the Nova's small engine bay, and make it work.

Since the car was already a drag racing machine, the switch was not as difficult, as it would have been on a stocker. In drag racing terms, the Nova is a "back half" car with a rear four-link and

adjustable coilover suspension that utilizes a narrowed Dana 60 rear end with 3.07 gearing, Strange axles and a spool center section which was assembled by On Track Automotive & Diesel Performance. Wilwood four-piston brakes provide the stopping power out back.

Up front is another set of QA1 coilovers connecting upper and lower control arms along with drop spindles. "Skinsies" mounted on 15-inch Centerline Drag Stars up front handle steering input from the Mustang II rack and pinion. At the rear, providing all the smoke and forward motion are huge slicks, 33/10.50x15 Mickey Thompsons mounted on Drag Star wheels.

Since John has never been one to leave anything stock for long, the donor 6.6L Duramax was shipped over to Jeff Dean for some serious work. The engine was disassembled, machined and balanced, and blueprinted utilizing Carrillo rods and Arias pistons on



Three stages of nitrous made the ride down the track that much more interesting.





**“John Fyffe of Lancaster, Ohio, is not known for following the crowd or trends, and he opted for something way different when it came time to drop a new powerplant into his '63 Nova, which was called a Chevy II back in the day.”**

the rotating assembly. The LB7 cylinder heads remain basically stock with welded aluminum injector cups.

A Fleece Performance intake tops the 406-cid Duramax, which is fed via a custom Fleece Performance 480 turbo that can generate up to 70 pounds of boost at full song. Exhaust is handed the easy way, through a Grand Rock 5-inch hood stack. Heat wrap keeps the turbo and exhaust pipe from melting the fiberglass hood.

Fueling is provided by 80-over injectors

and custom EFI Live programming. For added go-power, the D-Max is fitted with a three-stage nitrous system. All told, John says the combo makes 800 horsepower and 1,700 lb/ft. of torque. And in typical drag race fashion, the D-Max is backed by a well-built, drag race Power Glide two-speed



The Nova has been back-halved, since it started out as a pro street drag car. A four-link suspension works with QA1 adjustable coilovers. Traction is provided via 33-inch Mickey Thompson slicks while torque is transferred through a narrowed Dana 60 rear end.



The car is licensed and is streetable, and has a second seat for those brave enough to go for a ride.





automatic, complete with trans brake, connected to a huge driveshaft via 1350 U-joints.

Visually, the car is immaculate. You'd never know at first glance the front half is all fiberglass except for the huge cowl induction hood. River Valley Collision in Lancaster applied the Airport Turquoise paint with a hint of pearl. On the inside, it's pure race car, sort of. The stock dash was retained with a custom switch panel in place of the radio. The interior also has a NHRA legal roll cage and five-point harnesses for the twin racing seats, in case someone gets brave and wants to ride along. A full complement of ISSPRO gauges keeps track of the engine action.

John says the car is street legal and is a great cruise night driver. It also ran 10-second passes to win the Pro Mod class at the 2014 Scheid Diesel Extravaganza." All we know is it's a retro muscle car with our kind of twist. **UDBG**



The stock dash, complete with the factory gauge cluster including the clock, was retained. Door panels are aluminum with factory cranks. The radio delete houses switches while a full complement of ISSPRO and Auto Meter gauges keep track of the D-Max.



For better weight transfer, both the battery and fuel cell are mounted in the trunk.







## EVENT SCHEDULE 2016

**56th annual Circle K NHRA Winternationals**  
Feb. 11-14 · Pomona, Calif.

**32nd annual CARQUEST Auto Parts  
NHRA Nationals**  
Feb. 26-28 · Phoenix

**47th annual Amalie Motor Oil  
NHRA Gatornationals**  
March 17-20 · Gainesville

**17th annual NHRA Nationals**  
April 1-3 · Las Vegas

**7th annual NHRA Four-Wide Nationals**  
April 22-24 · Charlotte, N.C.

**29th annual NHRA Spring Nationals**  
April 29-May 1 · Houston

**36th annual Summit Racing Equipment NHRA  
Southern Nationals**  
May 13-15 · Atlanta

**4th annual NHRA New England Nationals**  
June 3-5 · Epping, N.H.

**47th annual Toyota NHRA Summernationals**  
June 9-12 · Englishtown

**16th annual NHRA Thunder Valley Nationals**  
June 17-19 · Bristol, Tenn.

**10th annual Summit Racing Equipment  
NHRA Nationals**  
June 23-26 · Norwalk, Ohio

**19th annual Route 66 NHRA Nationals**  
July 7-10 · Chicago

**37th annual Mopar Mile-High NHRA Nationals**  
July 22-24 · Denver

**29th annual NHRA Sonoma Nationals**  
July 29-31 · Sonoma, Calif.

**29th annual NHRA Northwest Nationals**  
Aug. 5-7 · Seattle

**35th annual Lucas Oil NHRA Nationals**  
Aug. 18-21 · Brainerd, Minn.

**62nd annual Chevrolet Performance  
U.S. Nationals**  
Aug. 31-Sept. 5 · Indianapolis

### NHRA MELLO YELLO DRAG RACING SERIES COUNTDOWN TO THE CHAMPIONSHIP

**9th annual NHRA Carolina Nationals**  
Sept. 16-18 · Charlotte, N.C.

**5th annual AAA Insurance NHRA  
Midwest Nationals**  
Sept. 23-25 · St. Louis

**32nd annual NHRA Keystone Nationals**  
Sept. 29-Oct. 2 · Reading, Pa.

**31st annual AAA Texas NHRA Fall Nationals**  
Oct. 13-16 · Dallas

**16th annual NHRA Toyota Nationals**  
Oct. 27-30 · Las Vegas

**52nd annual Auto Club NHRA Finals**  
Nov. 10-13 · Pomona, Calif.

**FOR COMPLETE SCHEDULE  
AND TICKETS GO TO NHRA.COM**



PERFORMANCE PRODUCTS & SERVICE FOR CUMMINS DIESELS

8231 South 200 West, Fairmount IN 46928

Phone: (877) 948-3164 Fax: (765) 948-3163

# HAISLEY MACHINE

vhaisley@comteck.com www.haisleymachine.com

Van, Patty & Curt Haisley

WHERE WE PUT...CUMMINS POWER "TO THE GROUND"

## MORE FUEL. MORE FREEDOM.

### Fuel Up When You Want To, Not When You Have To!

Whether it's a larger replacement tank, an in-bed auxiliary tank, or a US DOT legal refueling tank, a Transfer Flow fuel tank gives you the freedom to fuel your truck when and where you want! You'll save time and money bypassing those expensive fuel stations and filling up where fuel costs less.

Transfer Flow fuel tanks are made from sturdy aluminized steel and bright aluminum diamond plate, and can be installed at over 325 locations in the U.S. and Canada.

Get more fuel. Get more freedom. Get a Transfer Flow fuel tank installed on your truck today!

**tfi TRANSFER FLOW, INC.**  
The Leader in Aftermarket Fuel Tank Systems™

1-800-826-5776

www.TransferFlow.com



REPLACEMENT TANKS



IN-BED AUXILIARY TANKS



REFUELING TANKS



THE WHEEL.  
REINVENTED.

WICKED  
WHEEL®

COMPRESSOR  
WHEELS

- 
- WW 2 Series
  - Increased boost
  - Lower drive pressures
  - Machined billet aluminum
  - Lower EGTs and faster spool
  - Ford, Dodge, Chevy and more
  - Improved power and performance
  - **NOT just a billet copy of the OEM wheel**
  - Customized designs for maximum surge protection and performance!

Accept no imitations.  
[www.wickedwheel.com](http://www.wickedwheel.com)

SCAN THE QR-CODE TO SEE IF THERE IS A  
WICKED WHEEL FOR YOUR APPLICATION.  
VISIT [www.wickedwheel.com](http://www.wickedwheel.com) or give us a  
call at 888-414-3457 for more information.



another original product by  
**Dieselsite®**

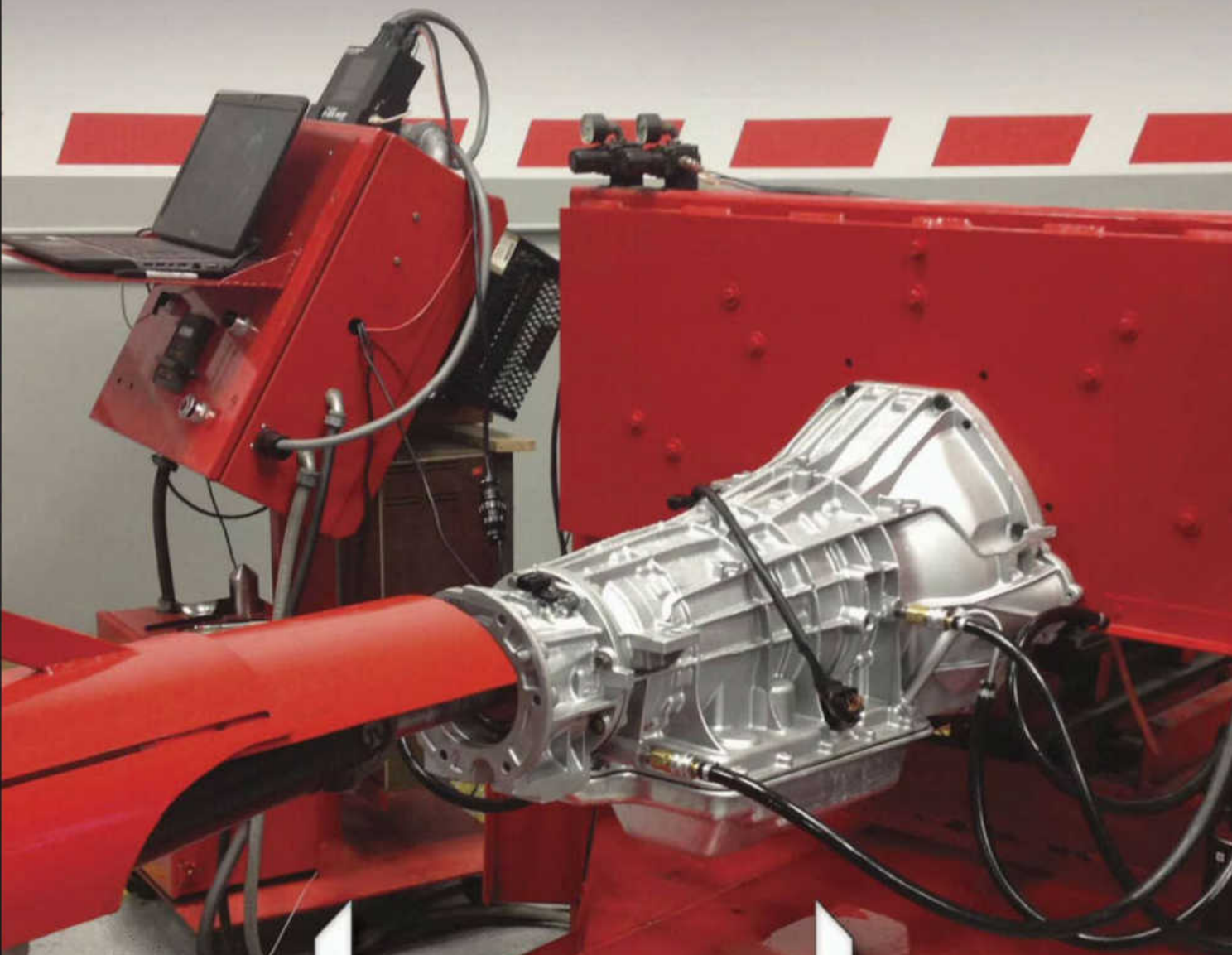
Wicked Wheel® is a registered trademark of DIESELSITE, INC. and Bob Riley

888-414-3457 DEALER INQUIRIES WELCOME [www.dieselsite.com](http://www.dieselsite.com)



# E40D, 4R100, & 5R110 TRANSMISSIONS FOR THE 7.3L, 6.0L, & 6.4L FORDS **ON STEROIDS.**

[www.dieselsite.com](http://www.dieselsite.com)

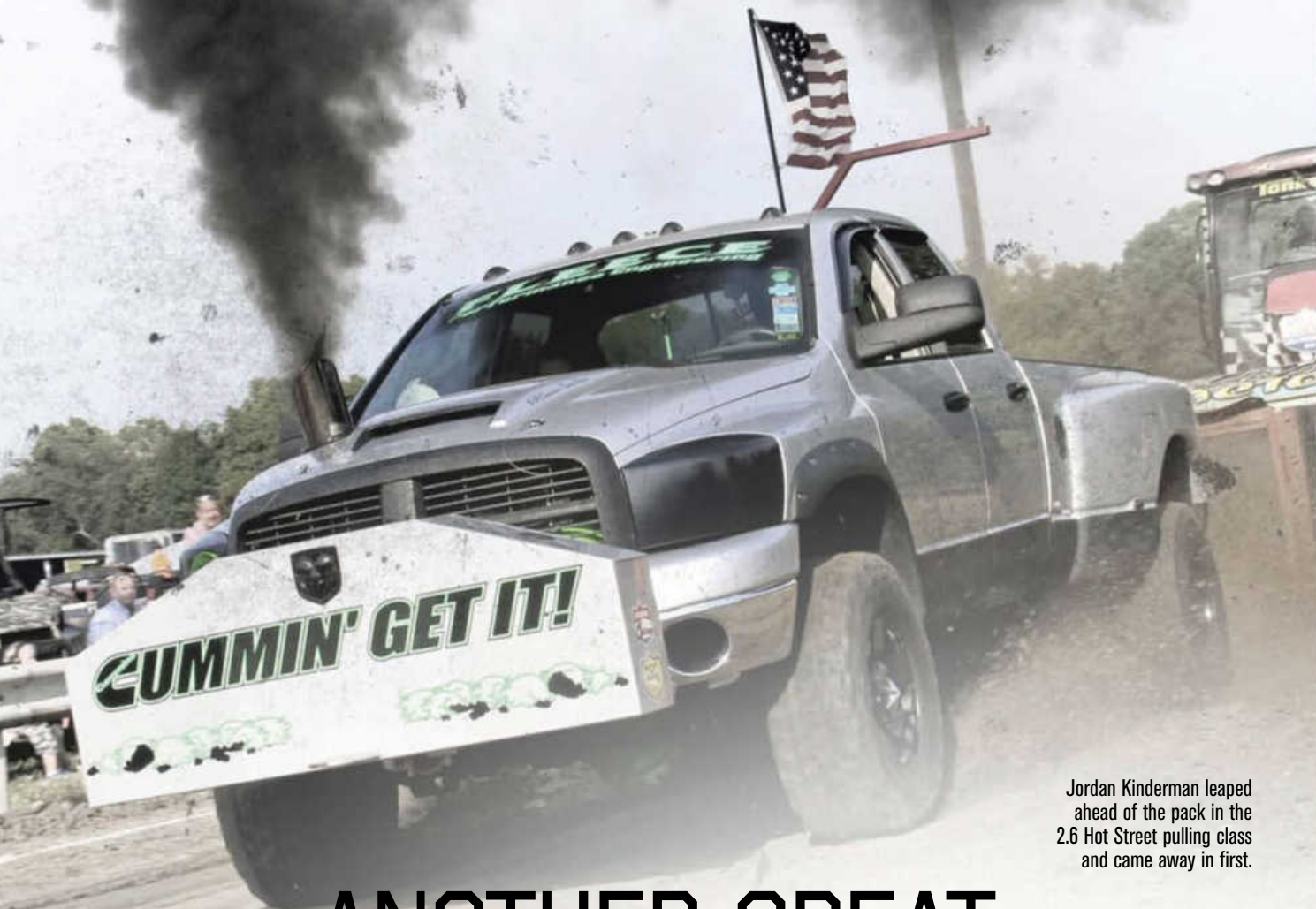


# Dieselsite®

PHONE: 888-414-3457

DEALER INQUIRIES WELCOME

# HOME-GROWN PULLIN'



Jordan Kinderman leaped ahead of the pack in the 2.6 Hot Street pulling class and came away in first.

## ANOTHER GREAT OUTLAW SLED PULL IN NORTH SALEM, INDIANA



**Text:** Kyle Tobin  
**Photography:** Chris Tobin and Kyle Tobin

**F**leece Performance Engineering has become one of the many companies in the diesel world to start from humble beginnings only to grow into a powerhouse in their field, even outgrowing their shop several times. In 2015, brothers Brayden and Chase Fleece and their crew put on a large show in Indianapolis for the first time—but what about their annual hometown pull in North Salem? Fleece Performance Engineering proved they will never forget where they came from by putting their all into the 7th Annual Hoosier State Showdown Sled Pull in rural North Salem, Indiana. The pull and tractor show has been drawing a large crowd for years in conjunction with the North Salem Old Fashion Days festivities on Labor Day weekend, and 2015 was no different, as spectators and competitors alike flocked in for the homegrown outlaw pull, nearing a thousand in total attendance.

Starting off first thing in the morning, locals had their beautifully restored tractors on display running parallel with the pulling track. As spectators milled around the exhibited machinery, the Fleece Performance crew and their many volunteers worked the track into shape and got the many trucks and tractors filling out the eight various classes set to run throughout the day. Before the graders and rollers were even off the track, as the first class of pullers lined up, the stands were packed full of eager diesel fanatics ready for a show.

First up to the clay was the 2.5 Work Stock class with a field of ten trucks, which tied for the largest pack of the day with the True Work Stock class, showing the accessibility to the sport for even entry level rigs that the Hoosier State Showdown provides. Ryan Kunkle and his Hollywood truck was first out of the gate, but wisely dropped his first pass, beating it by 42 feet in the last run. His final reach of 297-feet barely edged out Brad Mattingly at 296-feet who ended up in third place. But Kolin Dunn, fifth to run in the class was able to soar past his competitors with a whopping 320-foot pull.

Up next was the first of three tractor classes of the event, the 9,500 lb. tractors. After re-setting the sled once the first puller made his test pass, the class was up and running, blowing smoke into the air and slinging dirt down the track. Morgan Smith rounded out the podium in third with a 290-



Vintage tractors lined the grounds alongside the pulling track for spectators to ogle.



One of the biggest classes and the first to run, the 2.5 trucks filed to the starting line as the Fleece crew finished prepping the track.



Slinging mud and piping smoke, Kolin Dunn drug his way to the top position in the 2.5 Work Stock class.



foot pull behind Brian Patton whose 302-foot pull landed him in second. At 325-feet, David Ebelhar had a commanding lead as he took home first place in the class.

The 2.6 Hot Street class was geared up to go next. CW Cartmell ended up third place, coming in at 308-feet behind the closest finish of the event. Kaleb Barrett with the second pull of the class and Jordan Kinderman pulling fourth came down to less than six-inches between the two in the fight for first and second. Jordan Kinderman took the win with a pull of 311-feet 7-inches to Kaleb Barrett's run of 311-feet 3-inches for second.

Then came the rumbling of the 10,000-pound tractors. In a class of five, Brandon Glenn was able to pull his way to victory with a

328-foot pull in the second-to-last pull of the class, bringing the Buck Wild tractor its second win of the day. Brian Patton and Morgan Smith, who ran 319-feet and 295-feet respectively, both gained second and third place once again in the second tractor class of the event.

Next up was the pack of four elite trucks entered in the 3.0 Super Street class. Carey Clark's 285-foot pull wasn't enough to reach the podium with Evan Smoot pulling a 292-foot run to nab third place. Ahead in second was Kyle McCutchan who dropped his first pull that would have slotted him last, and was able to pull out a 299-foot run as the last puller of the class. But none were able to top the second puller to go, Jacob Bair, who managed

to drag the sled 310-feet down the clay runway in the bright orange Grin-N-Bair It classic Chevy.

The 10,000 lb. Open Tractor class would be the second to last class running just before the sun began to creep low. Brandon Glenn, the winner of the previous tractor class was able to land in the upper half of the six competitors in third place with his 298-foot pull. Stuart Mager significantly pulled ahead of third with a 323-foot pull but wasn't able to get past second place. Chad Darloge claimed first with the longest pull of the day at 330-feet.

As the sun began to dip below the horizon, the last pack of the event lined up. The ten-entrant True Work Stock class showcased the spirit of the event by allowing bone stock



This Hollywood outlaw, Ryan Kunkle, sent clay chunks flying as he carved his way into second in the 2.5 class.



CW Cartmell's Most Hated 2.6 Hot Street truck always puts on a great show, and he didn't disappoint as he climbed into third in his class.



The All Night Long 2.6 truck piloted by Kile Clamme churned the dirt and billowed smoke all the way down its nearly 300-foot pull.



The crazed smiley face at the nose of Jacob Bair's Grin-N-Bair It truck took him to the first spot in the 3.0 Super Street class.





Buck Wild took home the 9,500 lb. tractor win driven by David Ebelhar plus the 10,000 lb. tractor win with Brandon Glenn behind the controls.

Ryan Scott got the chance to push his daily farming rig down the track in the 10,000 lb. tractor class in North Salem's homegrown event.



Blacking out the sky and flinging mud down the track, Kyle McCutchan came out second in the 3.0 running.





# RESULTS

## True Work Stock

Place	Driver	Distance
1	Trevor Hull	293' 9"
2	Kerk Kessler	293' 2"
3	Lee Anthrop	292' 11"
4	Jon Shew	287' 1"
5	Layton Howe	286' 7"
6	Matt Green	279' 2"
7	Bill Trine	271' 9"
8	Andy Lienerth	262' 0"
9	Austin Lavles	224' 7"
10	Anthony Holland	204' 4"

## 2.5-inch Work Stock

Place	Driver	Distance
1	Kolin Dunn	320' 1"
2	Ryan Kunkle	297' 0"
3	Brad Mattingly	296' 6"
4	Jason Hoffman	287' 5"
5	Tanner Wannen	281' 7"
6	Dave Hinkle	268' 3"
7	John Bartlett	263' 2"
8	Jason Bannon	262' 8"
9	Colten Brown	253' 0"
10	Jesse Scott	4' 4"

## 2.6-inch Hot Street

Place	Driver	Distance
1	Jordan Kinderman	311' 7"
2	Kaleb Barrett	311' 3"
3	CW Cartmell	308' 6"
4	Nicholas Byrd	301' 2"
5	Kile Clamme	295' 6"
6	Jordan Jackson	281' 11"
7	Brian Shew	281' 5"

## 3.0-inch Super Street

Place	Driver	Distance
1	Jacob Bair	310' 11"
2	Kyle McCutchan	299' 6"
3	Evan Smoot	292' 10"
4	Carey Clark	285' 3"

## 9,500-pound Tractor

Place	Driver	Distance
1	David Ebelhar	325' 9"
2	Brian Patton	302' 0"
3	Morgan Smith	290' 8"
4	JD Berry	289' 7"
5	Derek Mace	264' 11"
6	Doug Bush	255' 10"
7	Mike Herr	225' 0"

## 10,000-pound Tractor

Place	Driver	Distance
1	Brandon Glenn	328' 6"
2	Brian Patton	319' 6"
3	Morgan Smith	295' 5"
4	Jason Bradenburg	264' 4"
5	Ryan Scott	118' 0"

## 10,000-pound Open Tractor

Place	Driver	Distance
1	Chad Darloge	330' 2"
2	Stuart Mager	323' 4"
3	Brandon Glenn	298' 10"
4	Tek Smith	290' 10"
5	Morgan Smith	266' 2"
6	Dustin Everett	255' 4"

## SPONSORS:

AIRDOG

AQUAGRAPHX CUSTOM TRUCKS  
& HYDROGRAPHICS

CHAMPION CHEVROLET

DANVILLE PERFORMANCE

EFILIVE

ENGINEERED DIESEL

FLEECE INSURANCE

IKT DIESEL PERFORMANCE

JJ MACHINE

NAPA AUTO PARTS

NORTH SALEM STATE BANK

RIGID INDUSTRIES

SPECIALTY SEED

TDI

TECHNA-FIT

VALAIR CLUTCHES



trucks looking to get a taste of the competition they love to finally get to run their own truck down the track. Barely a foot separated the podium finishers, starting with Lee Anthrop's 292-foot pull that landed him in third. The ninth puller of the class, Kerk Kesler, managed to pull his way into second place with a 293-foot 2-inch pull falling just a few inches behind the winner, Trevor Hull, and his 293-foot 9-inch distance.

With the sun going down, and the great pulling action concluded, the 2015 Hoosier State Showdown came to a close. Fitting in a full day of pulling that thrilled the local and visiting crowd numbering around 1,000—the Fleece brothers and their crew of employees and volunteers alike kept to their roots and gave their hometown a great show. Allowing a variety of classes that appeal to wide spectrum of competitors from stock daily drivers to purpose-built pullers gives the outlaw sled pull a unique, grass roots feeling that North Salem, Indiana, cherishes year after year. We hope to see you there next year. **UDBG**



Wild paint job gleaming, Chad Darloge and his Show Time tractor won the 10,000 lb. Open class with the longest pull of the night.



Trevor Hull pulled down first place in the True Work Stock class by less than a foot against his competition.

**SOURCES:** ➤ Bungart Motorsports 573.619.7573 [BungartMotorSports.com](http://BungartMotorSports.com)

➤ Fleece Performance Engineering 855.839.5040 [FleecePerformance.com](http://FleecePerformance.com)



# DOUBLE DOWN & SAVE BIG



It doesn't get better than this. Get 2 Great Magazines at 1 Great Price. Combine 1 Yr subscription to **Ultimate Diesel Builder's Guide** along with 1 Yr subscription to **Diesel World** and save **73% off** the cover price

**DON'T LET THIS OFFER EXPIRE. ACT NOW!**

**Fill out the order form below and mail it with your payment information to  
Engaged Media Inc., Lockbox # 70253, Philadelphia, PA 19176-9883**

**JUST**  
FILL IT ▶ CUT IT ▶ SEND IT

**YES! Sign me up for a subscription to Ultimate Diesel Builder's Guide and Diesel World for \$32.95 only**

That is a total of 18 issues for a total savings of \$86.87 off the cover price

Method of Payment ☐ Check enclosed ☐ Credit Card ☐ Money Order ☐ Bill me Later

Payment through credit card ☐ Visa ☐ MC ☐ AMEX ☐ Discover

Name on credit card \_\_\_\_\_

Credit card number

Expiration date \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Subscriber name \_\_\_\_\_ First \_\_\_\_\_ Middle \_\_\_\_\_ Last \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_

SCAN QR CODE



Alternatively, Log on to [www.engagedmediamags.com/combo\\_udbgdw](http://www.engagedmediamags.com/combo_udbgdw) and use Promo code **AN54B311**  
or call our toll free no **800-764-6278** to order your subscription. Allow 6 to 8 weeks for delivery of first issue.

Outside US, add \$49 per year for postage. Pay in US funds only.



Like us.



**DIESEL  
WORLD**

facebook.com/dieselworldmagazine



**DURAMAX  
& ALLISON  
SPECIALISTS**



**MA**  
Merchant Automotive

OVER 50,000 PARTS IN HOUSE



MERCHANT-AUTOMOTIVE.COM 866-399-7169

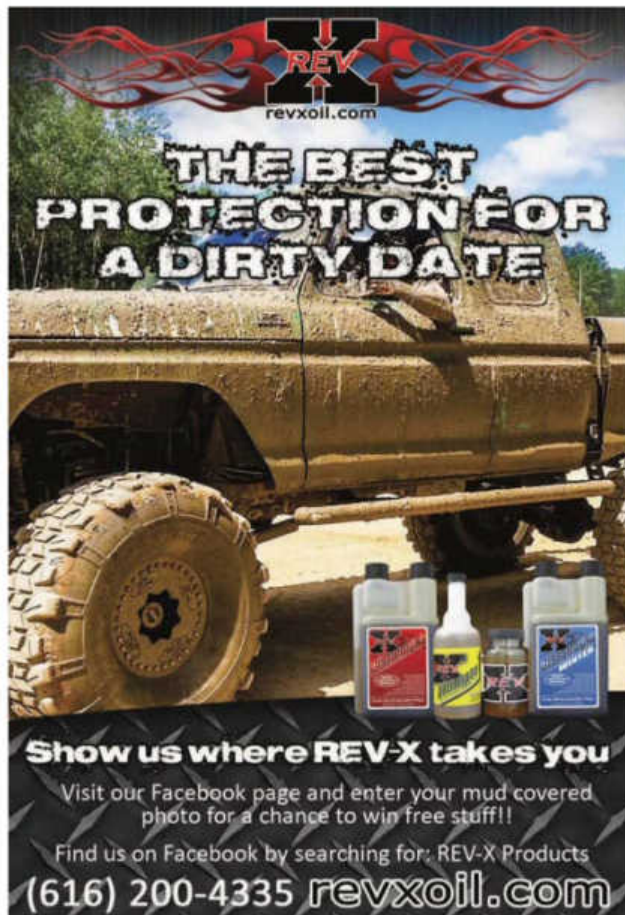
Subscribe to

**Diesel World**  
**Today!**



Call us at  
1-800-764-6278

www.engagedmediamags.com



**REV-X**  
revxoil.com

**THE BEST  
PROTECTION FOR  
A DIRTY DATE**

**Show us where REV-X takes you**

Visit our Facebook page and enter your mud covered photo for a chance to win free stuff!!

Find us on Facebook by searching for: REV-X Products

**(616) 200-4335 revxoil.com**



# Problems Solved Here!

Engine Overheating? • Trans Running Hot? • Brakes Warping?  
Yeah, We've Fixed That...

Ford Performance Specialists  
has made our reputation  
as the "Go To" source for  
correcting hard to fix problems.  
By working **EXCLUSIVELY** on Fords,  
we solve problems that others can't.

Call us today with your  
Ford Truck problems...

Curtis, FPS' lead technician,  
is installing a FPS external  
engine oil cooler system.  
This and many other kits/parts  
are available for mail order,  
or visit our Atlanta facility for  
professional installation.

Call Us Today:  
**770.949.7191**

**FORD**  
Performance Specialists

"FPS works on  
Fords Exclusively!"

Tech 770.949.7191 • eMail [ShoGuy89@aol.com](mailto:ShoGuy89@aol.com) • Fax 770.485.9738 • Online [FordSpecialists.com](http://FordSpecialists.com) • Mableton GA 30126

Prices subject to change. Parts subject to availability. Some items intended for off-road use only. Ask for details on this and warranty info. Not affiliated with Ford Motor Co. Independently owned & operated.

All vehicles shown are owned by customers of Ford Performance Specialists. Items that modify vehicle emissions control systems without CARB Certification are illegal for sale or use in California.

Hellwig will support you **wherever your journey takes you.**

**Hellwig**  
SUSPENSION PRODUCTS



**LOAD &  
SWAY  
CONTROL**

★ **MADE IN  
USA**

**HELLWIGPRODUCTS.COM • 1-800-367-5480**

**Hellwig**  
PRODUCTS



**For all of you truck performance parts and accessories at the best prices with the highest level of customer service.**



[www.ktperformance.net](http://www.ktperformance.net)

Toll Free: 1-855-KTPerformance (855-587-3736)



**Dealer Accounts Available**

# Save Big with this Diesel Duo!

**JUST**

**FILL IT • CUT IT • SEND IT**

**YES!!! sign me up for a subscription to Diesel World and Ultimate Diesel Builder's Guide for \$32.95 only**

That is a total of 18 issues for a total savings of \$74.87 off the cover price

Method of Payment ☐ Check enclosed ☐ Credit Card ☐ Money Order ☐ Bill me Later

Payment through credit card ☐ Visa ☐ MC ☐ AMEX ☐ Discover

Name on credit card \_\_\_\_\_

Credit card number  Expiration date \_\_\_\_/\_\_\_\_/\_\_\_\_

Subscriber name First MI Last

Address \_\_\_\_\_

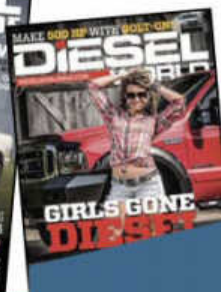
City State

Phone \_\_\_\_\_

Email \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

SCAN QR CODE



**SAVE BIG ONLY \$32.95**

Get twice the power of diesel with big savings. **Limited-time offer. Act now!**

Harness the power of diesel with this super-economical combo offer. Club a 1-yr subscription of **Diesel World** along with a 1-yr subscription of **Ultimate Diesel Builder's Guide** and get a turbo-charged **69% discount** on the combined cover price!

**Fill out the order form and mail it with your payment information to**  
Engaged Media Inc., Lockbox # 70253,  
Philadelphia, PA 19176-9883

Alternatively, Log on to [www.engagedmediamags.com/combo\\_dwudbg](http://www.engagedmediamags.com/combo_dwudbg) and use Promo code **A85314B2** or call our toll free no **800-764-6278** to order your subscription. Allow 6 to 8 weeks for delivery of first issue. Outside US, add \$49 per year for postage. Pay in US funds only.



# SINISTER DIESEL



**Sinister 58v FICM for 6.0 Powerstroke \$799**



Our FICM improves performance and drivability, gives better horsepower and fuel economy, & the 58V output improves cold weather starting.

**Sinister Fuel Tank Sump Kit \$164**



**Sinister Diesel Edition Stage Two Powermax Turbo \$2,099**



Featuring the BatMoWheel, our turbo increases compressor flow & boost response, has quick turbo spool up, and produces great mid and high end horsepower.

**Sinister Steering Box Support for Dodge 2500/3500 '94-'15 4WD from \$169**



This kit helps eliminate the death wobble & steering play common in Dodge pickups and installs in under 1 hour.

**Sinister 6.0L Powerstroke Hot & Cold Side Intercooler Charge Pipes \$349.99**



## PACKAGES & SOLUTIONS



**'07.5-'12 Dodge 6.7L Cummins Head Gasket & ARP Head Stud Combo \$799**



**Basic Solution for '04-'07 Ford 6.0L Powerstroke With Sinister Replacement EGR Cooler \$690**



**'04.5-'05 Chevy 6.6L LLY Duramax Complete Solution with Replacement EGR Cooler \$1060**



**'03-'07 Ford 6.0L Powerstroke Head Gasket & ARP Head Stud Combo \$669**

## FUEL UPGRADES

**Sinister '01-'15 Duramax CAT Fuel Filter Adaptor from \$129.99**



The Sinister CAT fuel filter adaptor allows you to install a 2 micron CAT fuel filter without any major modifications to your '01-'15 Chevy or GMC.

\*Also available for '04.5-'07 Cummins

## PARTS UNDER \$200

**Sinister Race Fuel Rail Plug for '04.5-'10 Duramax & '07-'12 Cummins \$45**



**'05-'13 Ford F250/F350 Sinister Leveling Kit \$99**

**Sinister 7.3L-6.0L Thermostat Housing \$49**



**2007 Modified Grille Fits '99-'04 Super Duty & '00-'04 Excursion \$199**



## EXHAUST KITS



**Sinister Diesel Stainless Steel Exhaust Kits available for Ford, Chevy, & Dodge**

4" - \$465  
5" - \$525

Tip Included!

\*\*This product is capable of disabling emissions equipment. If using DPF/EGR removed tuning, this high performance product is intended SOLELY for closed-course racing use and is not street legal in ANY state. This product cannot be used on any vehicles registered or certified for highway use. This Product is NOT for sale or use in the state of California.



# TOLL FREE: 855-445-9685 SINISTERDIESEL.COM

## Sinister Coolant Filtration Systems



from  
\$139



Our bypass-style system filters a small amount of the coolant on each pass and removes all solid particles. Install a coolant filtration kit in order to extend the longevity of your cooling system components.

## Sinister Raw Up-Pipes for Ford Powerstroke 7.3L '99-'03



Eliminate the leaky slip joint in the cast merge piece with our mandrel bent & fully TIG welded stainless steel up pipes.

\$399.99



## Sinister 6.0L & 7.3L Regulated Fuel Kit

This kit upgrades your system with an adjustable regulator, high flow fuel lines, & a 6 micron spin-on style fuel filter that integrates right into your factory fuel lines.

from  
\$649

## Sinister Replacement EGR Coolers

from \$319



Stock EGR Cooler



Sinister Replacement EGR Cooler

Tired of your EGR cooler clogging or just want to prevent future headaches? Our EGR cooler looks and fits like your factory model, but we replaced the narrow internal cooling fins with high-flow stainless steel tubing for improved reliability.

## POWER PACKAGES

### Dodge Power Package for 2004-5.07 5.9L Cummins

~~\$1,910~~  
\$1,299



### GM/Chevy Power Package for 2001-07 6.6L Duramax

~~\$1,910~~  
\$1,299



### Ford Power Package for 2003-07 6.0L Powerstroke

~~\$1,213~~  
\$899



## COLD AIR INTAKE

### Sinister Diesel Cold Air Intake for '03-'07 6.0L Ford Powerstroke

\$349



Our intakes are made of mandrel bent aluminum tubing and silicone couplers for maximum air flow and durability. Plus, our intakes are manufactured in-house for the lowest variability tolerances and the highest quality control. Feed your engine the cold air it needs with a Sinister Cold Air Intake.

\*WARNING: REGARDING CONSUMER SAFETY: Not legal for sale or use on pollution-controlled motor vehicles anywhere in the United States. Legal ONLY for off-road competition racing vehicles and cannot be used on vehicles that are operated on public streets, roads or highways. DISCLAIMER: (1) This product may NEVER be installed on a vehicle registered for highway or public street use. (2) By installing this product onto your vehicle, you assume all risk and liability associated with its use. (3) It is your responsibility to make sure your vehicle complies with all federal, state, and local emissions laws, federal and many state and local laws prohibit the removal, modification or rendering inoperative of any part of the design affecting emissions or safety on motor vehicles used on a public street or highway. Violation may result in a fine of up to \$10,000 per vehicle or possibly higher depending on charges in the law. All cold air intakes and filters for removing your vehicle's emissions equipment are the sole responsibility of the user. (4) Due to its high performance nature, this product may void vehicle manufacturer's warranty. (5) Sinister Diesel Company, Inc. is not responsible for vehicle or product damage by installing this product, you release Sinister Diesel Company, Inc. of any and all liability associated with its use. (6) No other applications besides off-road competition racing use are intended or implied. Depending on where you live, additional restrictions may apply. Check all applicable laws before installing or using PRODUCT. (7) NO WARRANTY. (8) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (9) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (10) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (11) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (12) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (13) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (14) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (15) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (16) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (17) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (18) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (19) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (20) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (21) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (22) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (23) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (24) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (25) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (26) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (27) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (28) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (29) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (30) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (31) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (32) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (33) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (34) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (35) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (36) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (37) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (38) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (39) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (40) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (41) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (42) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (43) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (44) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (45) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (46) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (47) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (48) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (49) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (50) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (51) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (52) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (53) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (54) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (55) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (56) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (57) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (58) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (59) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (60) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (61) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (62) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (63) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (64) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (65) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (66) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (67) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (68) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (69) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (70) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (71) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (72) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (73) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (74) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (75) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (76) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (77) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (78) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (79) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (80) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (81) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (82) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (83) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (84) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (85) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (86) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (87) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (88) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (89) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (90) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (91) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (92) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (93) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (94) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (95) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (96) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (97) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (98) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (99) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER. (100) SINISTER DIESEL COMPANY, INC. IS NOT A RACING EQUIPMENT MANUFACTURER.





# AMERICAN FORCE

DEALER INQUIRIES WELCOME! MORE WHEEL DESIGNS AVAILABLE ONLINE!  
[www.americanforce.com](http://www.americanforce.com) Tel. 786.345.6301 • 1.888.271.4335

**6061 FORGED**  
ALUMINUM CUSTOM BUILT